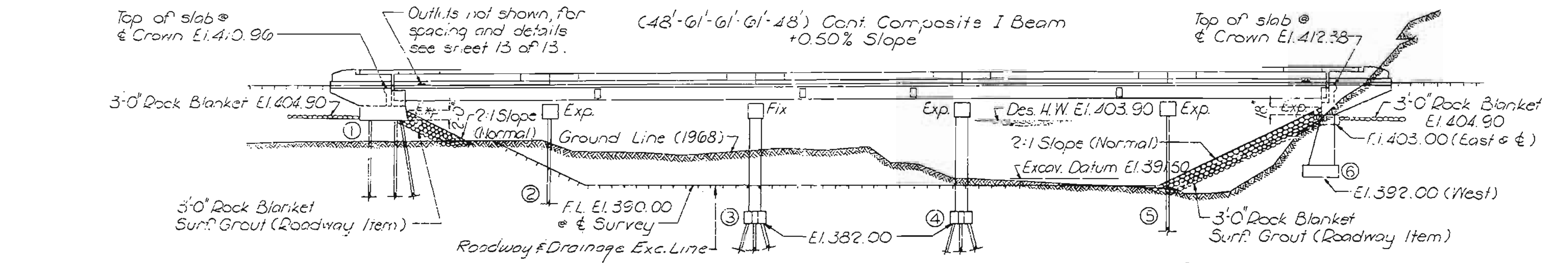
FOR INFORMATION ONLY **A2269R, Sht. 1**

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. Nº	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	269	



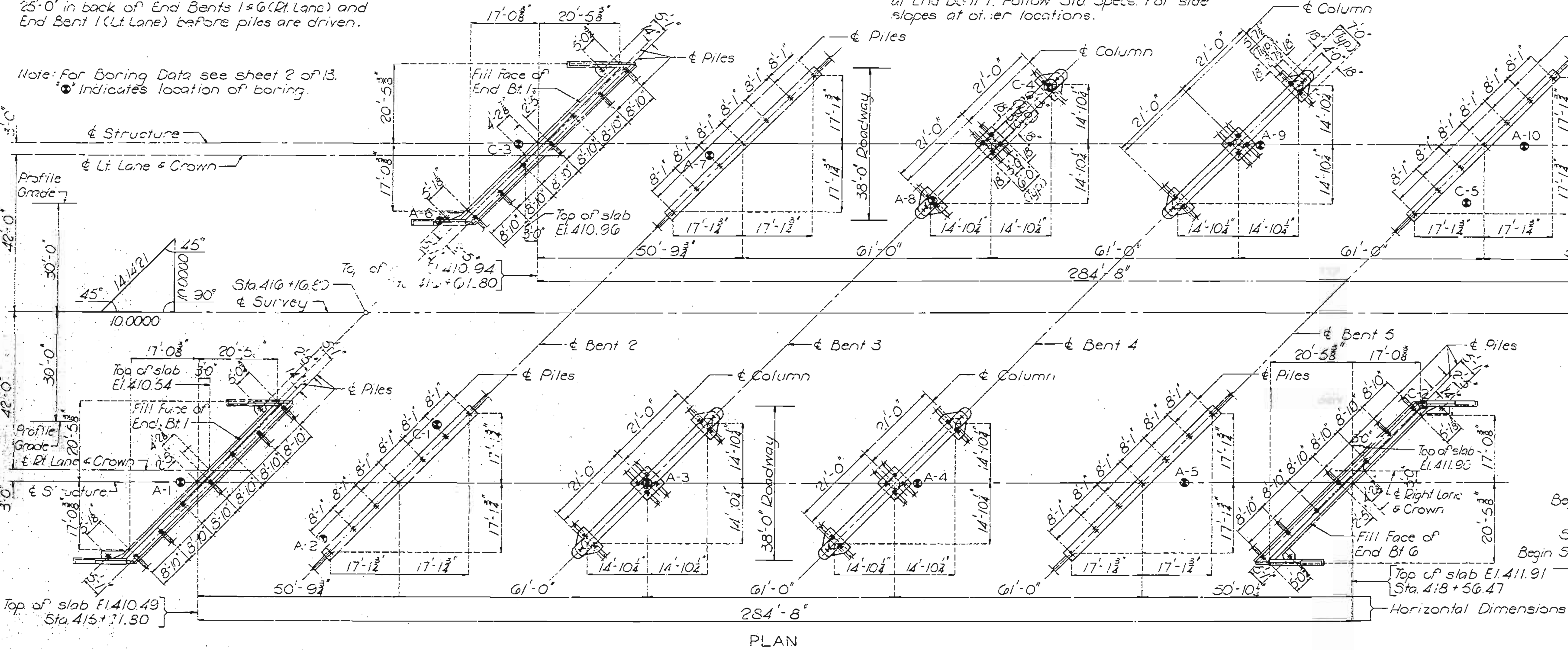
Note: Compacted roadway fill (full roadway width) shall be placed up to elevation of bottom of concrete beam in front of and not less than 25'-0" in back of End Bents 1 & 6 (Rt. Lane) and End Bent 1 (Lt. Lane) before piles are driven.

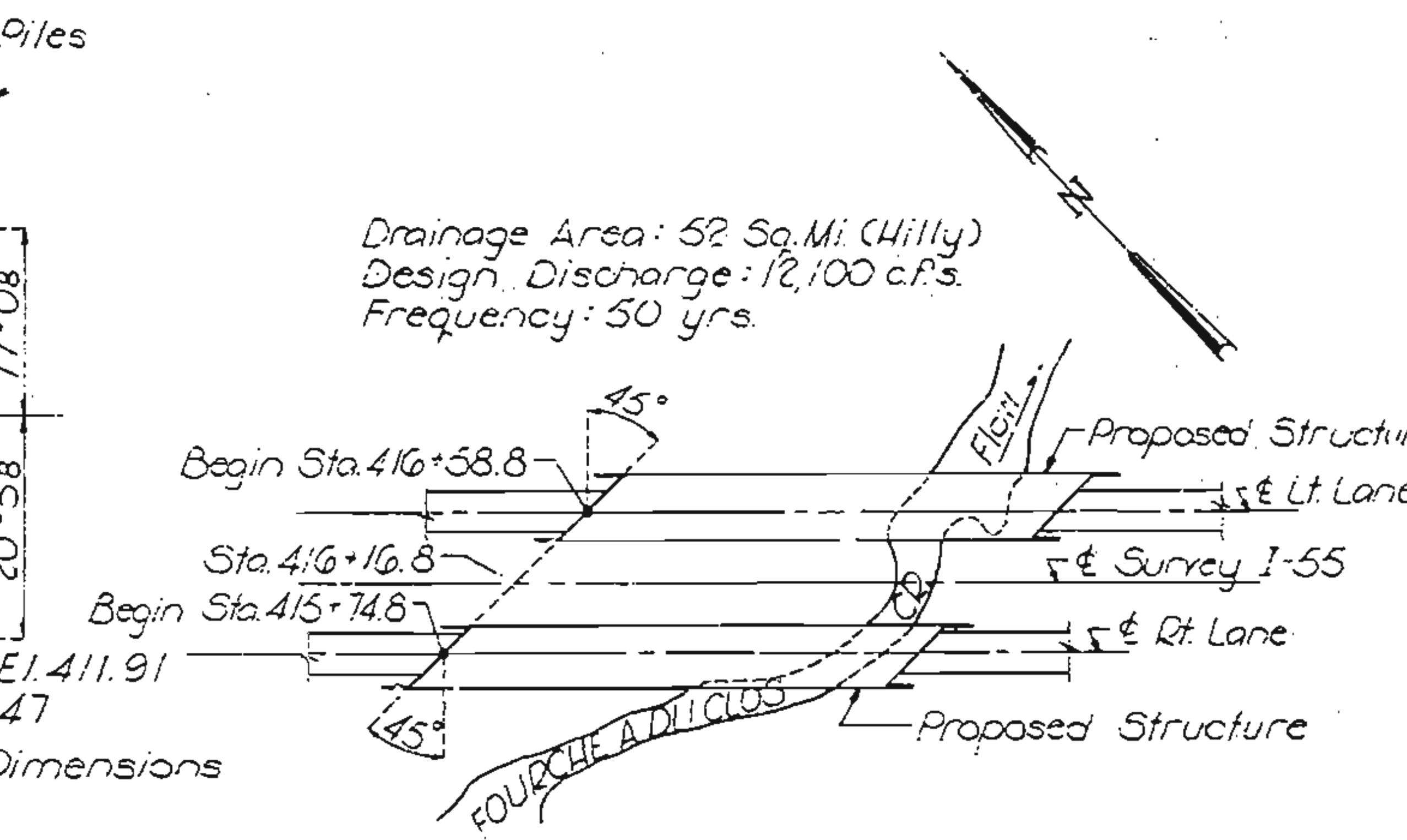
Note: Continue Rock Blanket between Right and Left Lane structures. For Right Lane structure carry Rock Blanket 300' along West side of fill at End Bent 1. Follow Std. Specs. for side slopes at other locations.

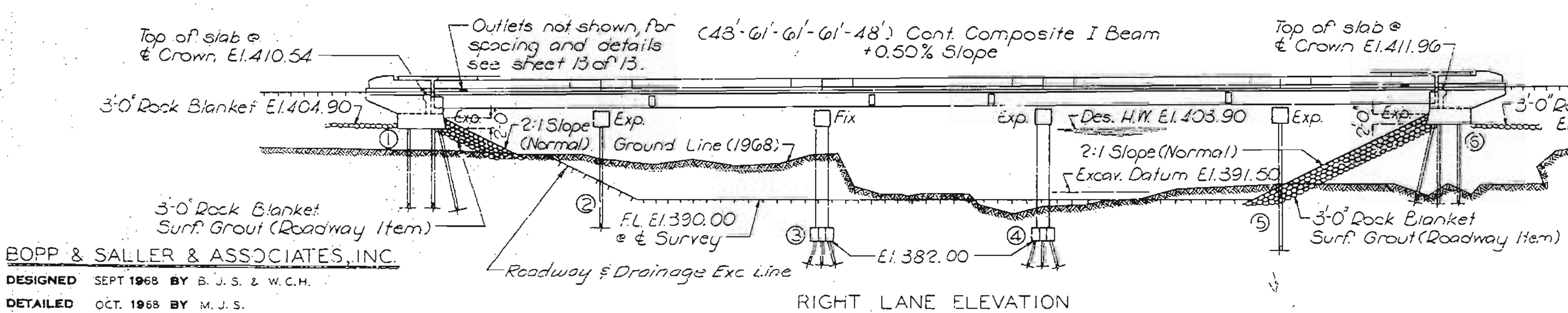
Note: For Boring Data see sheet 2 of 13. '⊕' indicates location of boring.

GENERAL NOTES:

Design Specifications: A.A.S.H.O. - 1965
Design Loading: HS20-44
15#/Sq. Ft. Future Wearing Surface
Modified 24,000# Tandem Axle
Earth 120# Equivalent Fluid Pressure 30#
Fatigue Stress - Case I
Design Unit Stresses: Class B Concrete (Substructure) f'c = 1,200 p.s.i.
Class B1 Concrete (Superstructure) f'c = 1,600 p.s.i.
Reinforcing Steel fs = 20,000 p.s.i.
Structural Steel (A.S.T.M. A36-66) fs = 20,000 p.s.i.
Steel Pile (A.S.T.M. A36-66) fb = 9,000 p.s.i.
Superstructure deck to be surface sealed.
Field connections, High Strength Bolts 3/4"ϕ, holes 13/16"ϕ except as noted.
Paint: Shop, none: Field, by contractor in accordance with Std. Spec. 712.12.







B.M. #32A - Elev. 399.57 - 100d spike in root of 15" Honey Locust, 136' Lt. of Sta. 417+75.

BRIDGE ROUTE I-55 OVER FOURCHE A DU CLOS CREEK

STATE ROAD INTERSTATE ROUTE 55

ABOUT 0.6 MI. SO. OF BLOOMSDALE

PROJECT NO. I-55-2(9) SEC. B (RTE. I-55) **STA.** 416+61.80 (LT. LANE) 415+71.80 (RT. LANE)

STE. GENEVIEVE **COUNTY**

SUBMITTED BY:

REGISTERED PROFESSIONAL ENGINEER
MISSOURI NO. E-11185

SUBMITTED BY W. D. Carney, BRIDGE ENGINEER, DATE 6-26-69
APPROVED BY M. J. Snider, CHIEF ENGINEER, DATE 6-26-69

Sheet No. 1 of 13.

STD. 706.30
A-2269

BOPP & SALLER & ASSOCIATES, INC.

DESIGNED SEPT 1968 BY B. J. S. & W. C. H.
DETAILED OCT. 1968 BY M. J. S.
CHECKED OCT. 1968 BY A. J. S.

Note: This drawing is not to scale. Follow dimensions.

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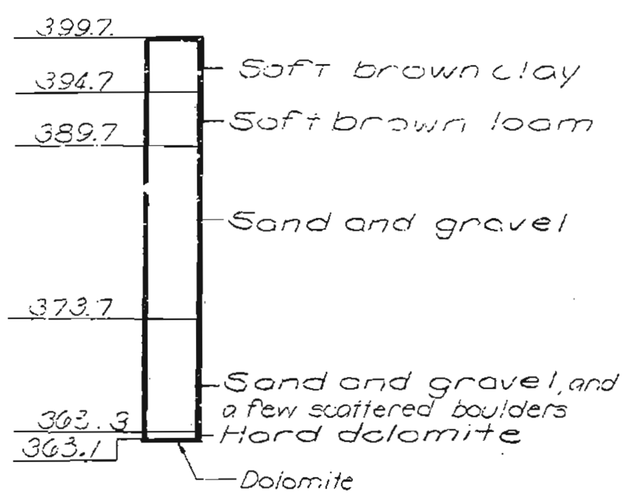
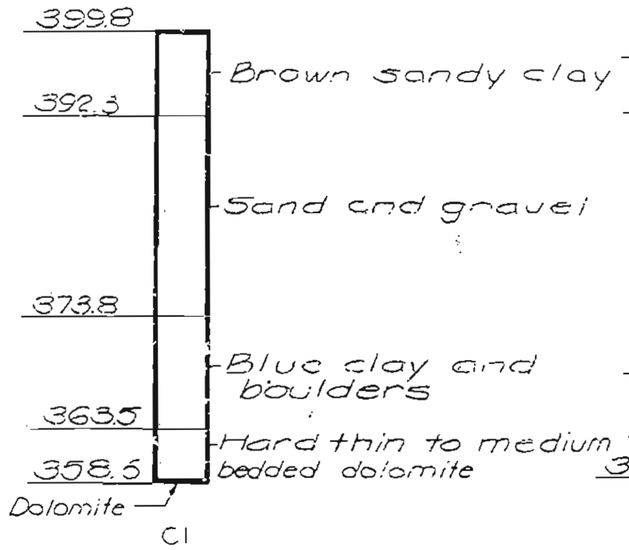
MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19		

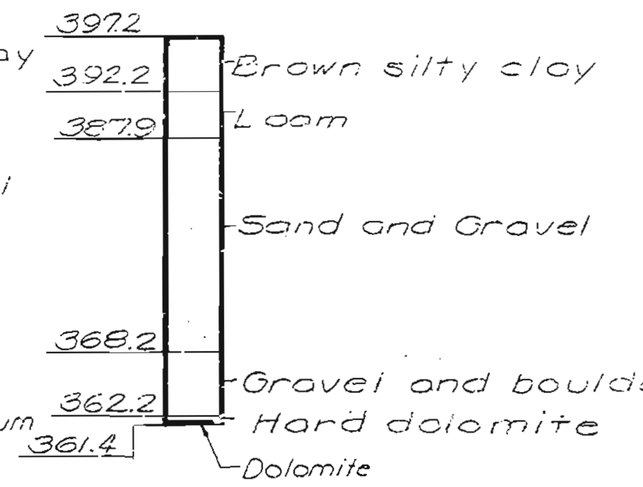
FOR INFORMATION ONLY



A1



C1



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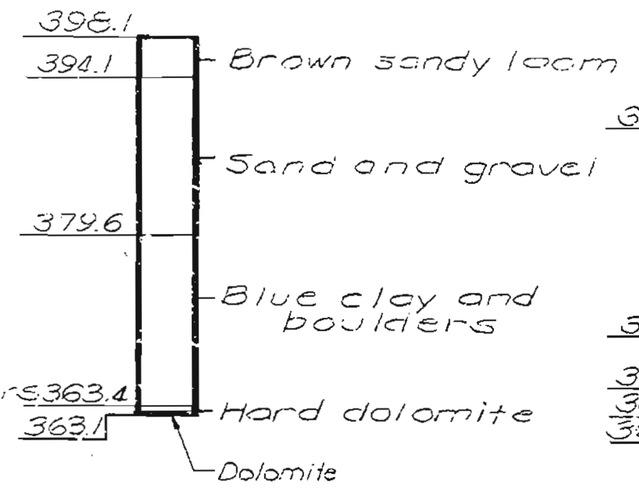

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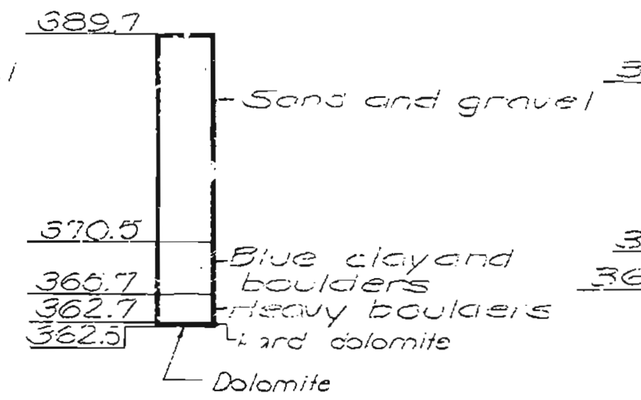

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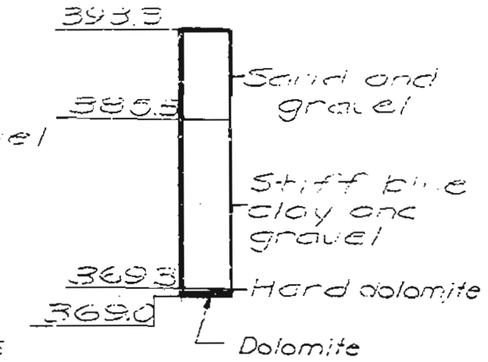

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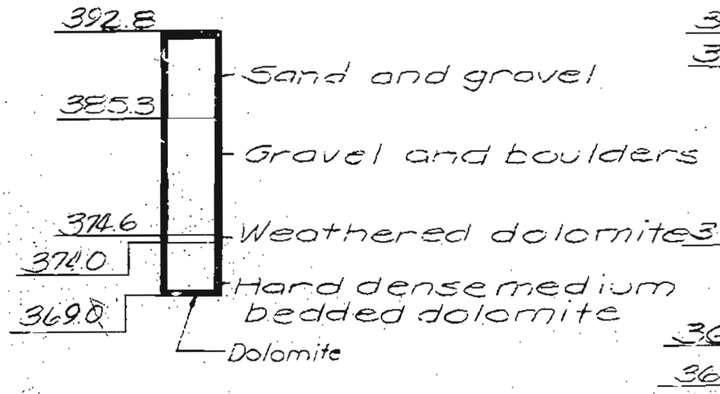
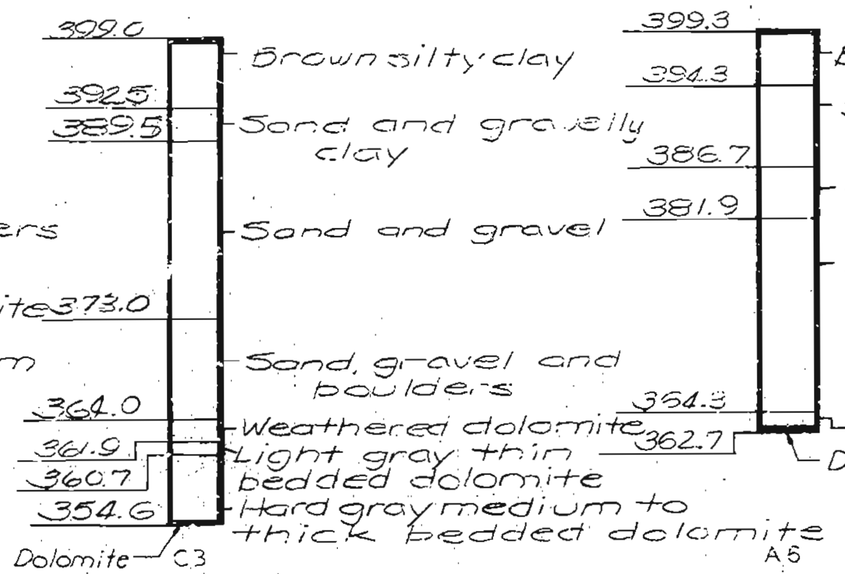
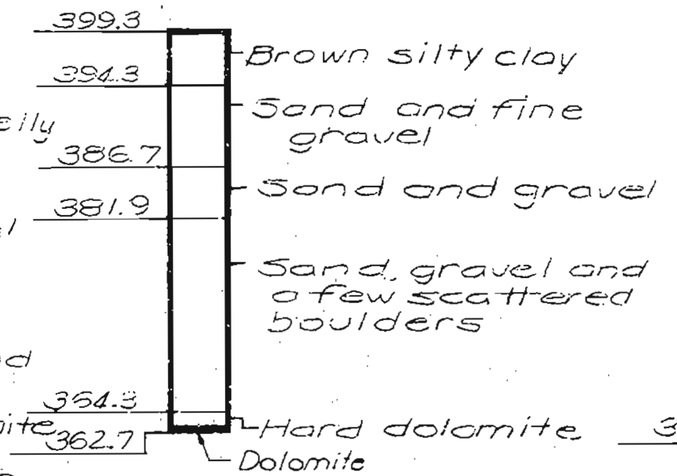


C2





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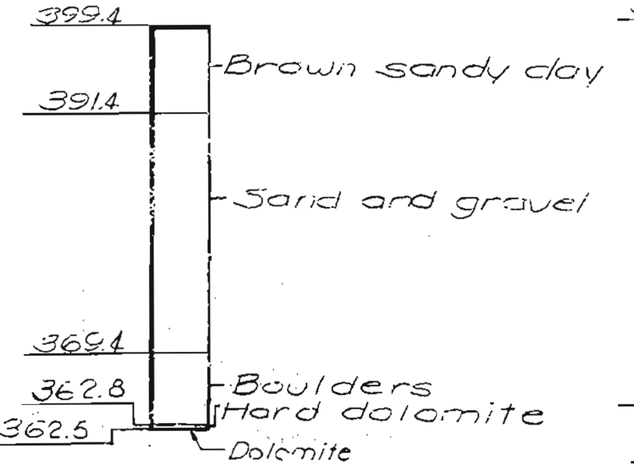

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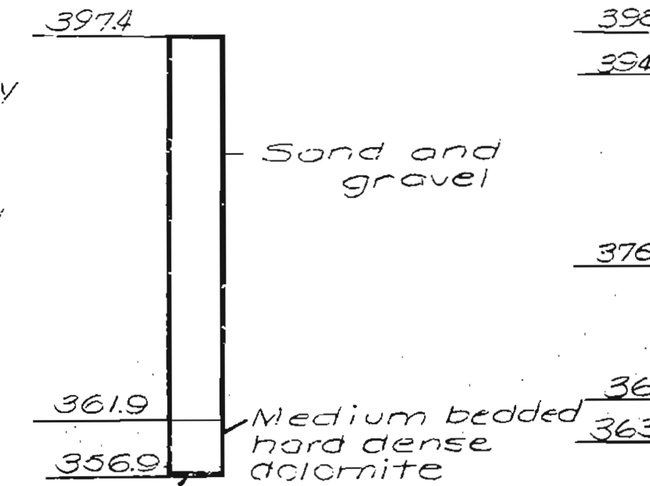
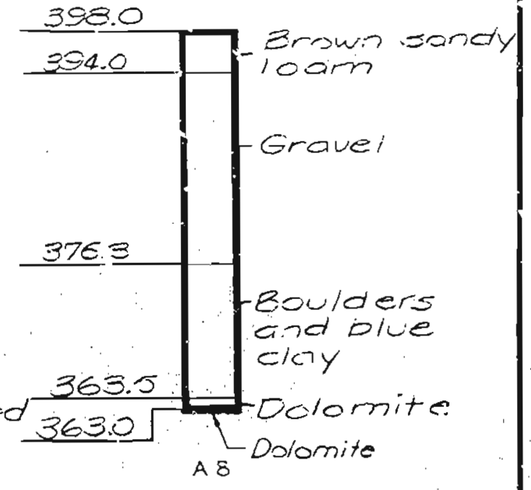
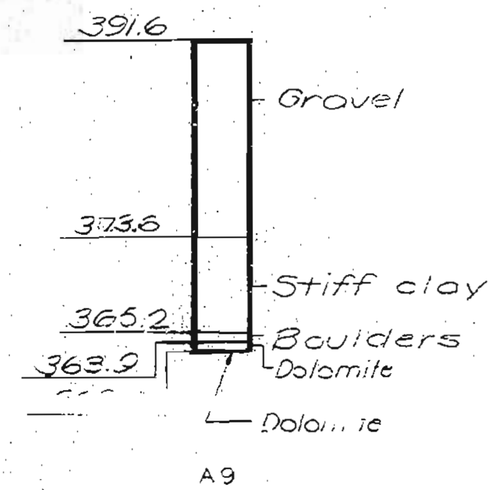
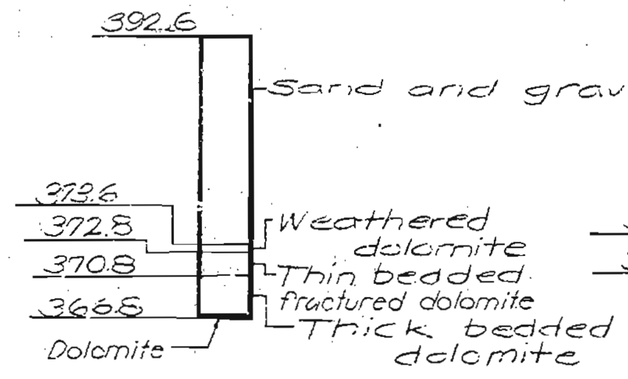
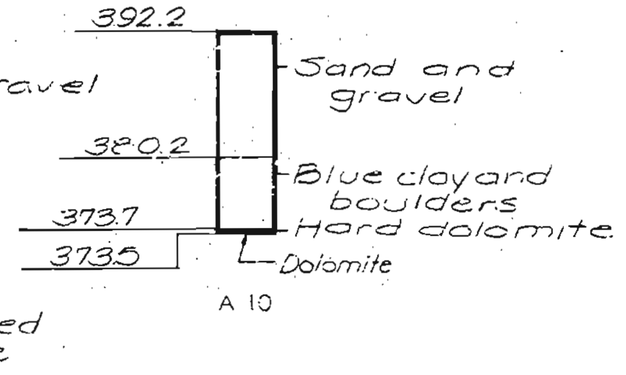


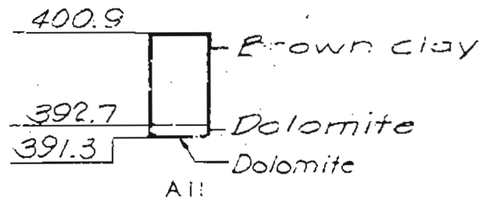






C5





LOG OF SOUNDINGS
C-Core A-Auger
Note: For location of soundings see sheet 1 of 13.

ESTIMATED QUANTITIES				
ITEM		SUBSTR.	SUPERSTR.	TOTAL
Class 1 Excavation	Cu.Yds.	110		110
Class 2 Excavation	Cu.Yds.	299		299
Structural Steel Piles (10")	Lin.Ft.	2852		2852
Class B Concrete	Cu.Yds.	384.1		384.1
Class B1 Concrete	Cu.Yds.		645.6	645.6
Reinforcing Steel	Lbs.	61,190	204,220	265,410
Painting	Tons		195.6	195.6
Fabricated Str. Carbon Steel	Lbs.	8,680	397,370	406,050
Bridge rail (one tube)	Lin.Ft.		1194	1194

Note: All concrete and reinforcement in end posts, poropets and curbs is included with superstructure quantities.
No payment for excavation will be allowed at End Bents 136 (Rt.Lane) and End Bent 1 (Lt. Lane).

Payment for painting exposed surfaces of piles and bracing is considered fully covered under item "Structural Steel Pile"
Payweight for Fabricated Structural Steel will be based on welded field splices regardless of type used.

FOOTING AND PILE DATA														
BENT NO.		1LT.L.	2LT.L.	3LT.L.	4LT.L.	5LT.L.	6LT.L.	1RT.L.	2RT.L.	3RT.L.	4RT.L.	5RT.L.	6RT.L.
BEARING PILE	Pile Type and Size	10BP42	10BP42	10BP42	10BP42	10BP42		10BP42	10BP42	10BP42	10BP42	10BP42	10BP42
	Number	9	7	10	10	7		9	7	10	10	7	9
	Approximate Length Ft.	41	41	19	19	32		41	41	19	19	37	33
	Design Bearing Tons	21	43	49	49	43		21	43	49	49	43	21
	Hammer Energy req'd Ft.lb.	7400	10,100	11,500	11,500	10,100		7400	10,100	11,500	11,500	10,100	7400
SPREAD FOOTING	Foundation Material						Rock						
	Design Bearing Tons/SqFt.						8.9						

Note: Minimum energy requirement of hammer based on plan length and design bearing value of piles. Increase by the factor (W+w)/2W when the weight of the ram (W) is less than the weight of the pile (w). All pile shall be driven to practical refusal.

DETAILED OCT. 1968 BY P.R.
CHECKED OCT. 1968 BY A.J.S.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2 of 13.

STE. GENEVIEVE COUNTY

A-2269

A2269R, Sht. 2

312

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	21	

COMPLETE BILL OF REINFORCING STEEL

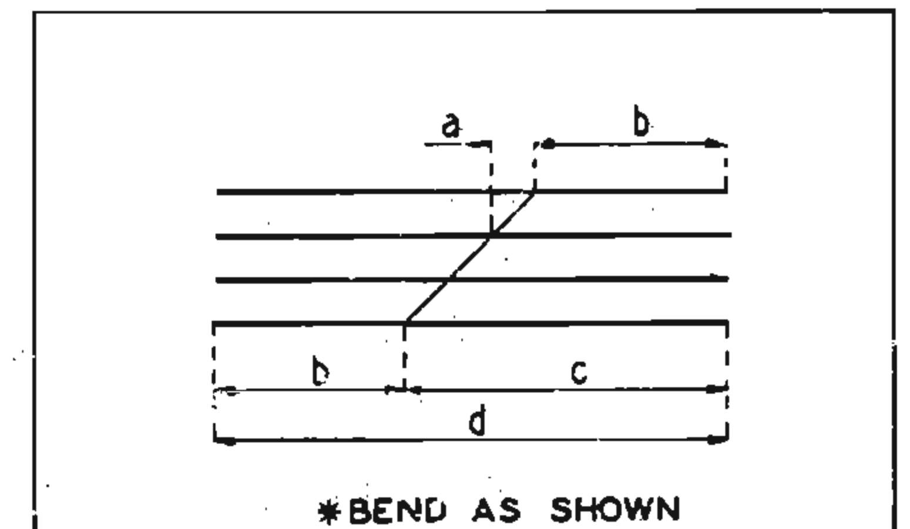
NO.	SIZE	LENGTH	MARK	LOCATION
End Bents 1				
6	#6	9'-3"	F1	Wing
6	#6	5'-3"	F2	"
24	#8	30'-0"	H1	Beam
8	#6	28'-6"	H2	"
16	#4	28'-6"	H6	Backwall
8	#6	29'-0"	H7	"
8	#6	13'-9"	H8	Wing
4	#6	22'-3"	H9	"
4	#6	22'-0"	H30	"
4	#6	11'-0"	T1	Wing
4	#6	7'-9"	T2	"
4	#6	10'-6"	T3	"
4	#6	9'-6"	T4	"
31	#4	12'-9"	J1	Beam
24	#4	4'-0"	U5	"
10	#7	16'-9"	U6	"
10	#7	15'-0"	U7	"
6	#4	6'-0"	U8	Wing
6	#4	9'-6"	U9	"
6	#6	2'-9"	V2	Beam
28	#4	5'-6"	V4	Wing
14	#4	6'-0"	V5	"
8	#4	4'-3"	V6	"
28	#4	5'-6"	V7	"
14	#4	6'-3"	V8	"
20	#2	19'-9"	W1	A.B. Wells
Variable Bent 1 (Right Lane)				
4	#8	28'-9"	H3	Beam
4	#8	15'-0"	H4	"
1	#8	18'-6"	H5	"
15	#4	13'-3"	U2	Beam
14	#4	13'-3"	U3	"
1	#4	11'-3"	U4	"
108	#5	5'-6"	V1	Backwall
2	#6	3'-0"	V3	Beam
Variable Bent 1 (Left Lane)				
1	#4	11'-0"	U10	Beam
108	#5	5'-6"	V9	Backwall
Intermediate Bents 2 & 5				
32	#10	28'-3"	H12	Beam
16	#6	26'-6"	H13	"
126	#5	11'-0"	U11	Beam
56	#4	3'-9"	U13	"
40	#2	19'-9"	W1	A.B. Wells
Varia				
Variable Bent 2 & 5 (Right Lane)				
8	#10	16'-0"	H14	Beam
8	#10	27'-9"	H15	"
8	#10	15'-0"	H16	"
34	#5	11'-9"	U14	Beam
28	#5	11'-6"	U15	"
Variable Bent 2 & 5 (Left Lane)				
16	#10	19'-3"	H10	Beam
8	#10	20'-3"	H11	"
44	#5	11'-6"	U12	Beam

NO.	SIZE	LENGTH	MARK	LOCATION
Intermediate Bents 3 & 4				
108	#8	4'-0"	D1	Footing
48	#6	9'-3"	F4	Footing
16	#6	9'-0"	F5	"
16	#6	10'-0"	F6	"
32	#7	9'-3"	H18	Beam
16	#11	13'-0"	H19	"
48	#10	14'-3"	H20	"
8	#11	15'-6"	H21	"
24	#10	33'-3"	H22	"
16	#6	25'-6"	H23	"
24	#11	49'-6"	H24	"
8	#10	42'-0"	H25	"
240	#3	8'-0"	P1	Column
28	#4	3'-9"	U16	Beam
136	#5	12'-0"	U19	"
24	#5	11'-6"	U20	"
56	#5	9'-6"	U21	"
40	#2	19'-9"	W1	A.B. Wells
Variable Bent 3 & 4 (Right Lane)				
28	#5	10'-0"	U22	Beam
12	#5	12'-0"	U23	"
54	#8	21'-3"	V12	Column
Variable Bent 3 & 4 (Left Lane)				
28	#5	9'-9"	U17	Beam
12	#5	11'-9"	U18	"
54	#8	21'-9"	V11	Column
End Bent 6 (Right Lane)				
3	#6	9'-3"	F1	Wing
3	#6	5'-3"	F2	"
8	#8	30'-0"	H1	Beam
4	#6	28'-6"	H2	"
4	#8	15'-0"	H4	"
8	#4	28'-6"	H6	Backwall
4	#6	29'-0"	H7	"
4	#6	13'-9"	H8	Wing
2	#6	22'-6"	H26	"
2	#6	22'-3"	H27	"
4	#8	16'-6"	H28	Beam
4	#8	30'-3"	H29	"
2	#6	7'-9"	T2	Wing
2	#6	9'-6"	T4	"
2	#6	10'-9"	T5	"
2	#6	11'-3"	T6	"
20	#4	12'-9"	U1	Beam
15	#4	13'-3"	U2	"
14	#4	13'-3"	U3	"
12	#4	4'-0"	U5	"
5	#7	16'-9"	U6	"
5	#7	15'-0"	U7	"
3	#4	6'-0"	U8	Wing
3	#4	9'-6"	U9	"
1	#4	10'-9"	U27	Beam
108	#5	5'-6"	V1	Backwall
2	#6	2'-9"	V2	Beam
2	#6	3'-0"	V3	"
14	#4	5'-6"	V4	Wing
4	#4	4'-3"	V6	"

NO.	SIZE	LENGTH	MARK	LOCATION
End Bent 6 (Right Lane) (Cont.)				
14	#4	5'-6"	V7	Wing
7	#4	6'-3"	V13	"
7	#4	6'-3"	V14	"
10	#2	19'-9"	W1	A.B. Wells
End Bent 6 (Left Lane)				
30	#6	3'-0"	D2	Footing
4	#6	9'-3"	F1	Wing
5	#6	5'-3"	F2	"
8	#5	4'-3"	F3	Footing
8	#5	8'-3"	F7	"
14	#5	3'-9"	F8	"
5	#5	9'-6"	F9	"
4	#6	28'-6"	H2	Beam
8	#4	28'-6"	H6	Backwall
4	#6	29'-0"	H7	"
6	#6	13'-9"	H8	Wing
5	#6	17'-0"	H17	"
12	#10	22'-3"	H31	Beam
12	#10	18'-0"	H32	"
12	#9	29'-6"	H33	"
12	#10	29'-6"	H34	"
5	#6	16'-9"	H35	Wing
2	#6	7'-9"	T2	Wing
2	#6	9'-6"	T4	"
2	#6	17'-0"	T7	"
2	#6	17'-0"	T8	
3	#4	6'-0"	U8	Wing
3	#4	9'-6"	U9	"
54	#4	12'-0"	U24	Beam
15	#4	4'-0"	U25	"
11	#3	16'-0"	U26	Column
1	#4	12'-3"	U28	Beam
1	#4	12'-9"	U29	"
4	#4	5'-6"	V4	Wing
4	#4	4'-3"	V6	"
108	#5	5'-6"	V9	Backwall
10	#6	13'-3"	V10	Column
13	#4	9'-6"	V15	Wing
13	#4	9'-6"	V16	"
10	#2	19'-9"	W1	A.B. Wells
Superstructure				
1172	#5	3'-6"	C1	Curb
112	#5	3'-3"	C2	"
16	#6	13'-9"	C3	"
32	#6	25'-3"	C4	"
48	#6	31'-3"	C5	"
16	#5	4'-9"	R1	End Post
8	#5	6'-0"	R2	"
3	#5	6'-6"	R3	"
8	#5	6'-9"	R4	"
8	#5	7'-0"	R5	"
16	#5	7'-3"	R6	"
24	#5	7'-6"	R7	"
1236	#5	5'-3"	R8	Parapet
32	#5	9'-9"	R9	"
32	#5	10'-0"	R10	End Post
128	#5	9'-9"	R11	Parapet
184	#5	4'-3"	R12	"
64	#5	20'-0"	R13	"
96	#5	21'-0"	R14	"

NO.	SIZE	LENGTH	MARK	LOCATION
Superstructure (Cont.)				
1796	#6	40'-6"	S1	Slab
256	#6	43'-3"	S2	"
320	#4	16'-0"	S3	"
758	#4	32'-3"	S4	"
588	#6	41'-6"	S5	"
48	#6	4'-6"	S6	"

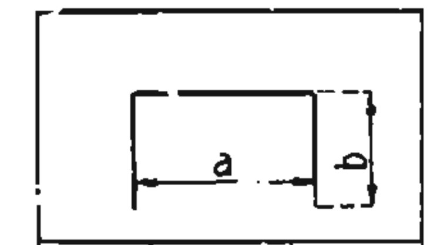
BENDING SKETCHES & CUTTING DIAGRAMS



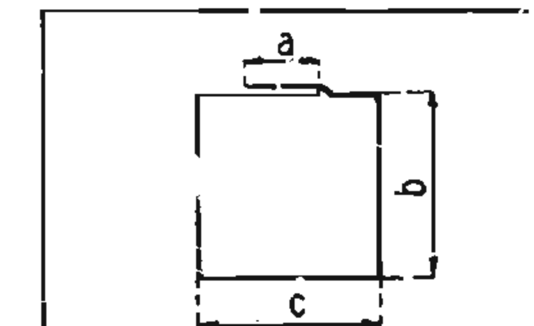
*BEND AS SHOWN

CUTTING SCHEDULE

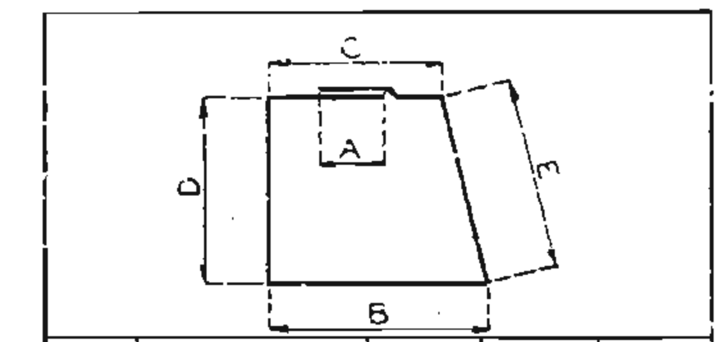
REMARKS	a	b	c	d
2H9 cut 4	2'-10"	9'-8 1/2"	12'-6 1/2"	22'-3"
5H17 cut 5	2'-2 1/2"	4'-1"	12'-11"	17'-0"
2H26 cut 2	2'-9"	9'-10 1/2"	12'-7 1/2"	22'-6"
2H27 cut 2	2'-11"	9'-8"	12'-7"	22'-3"
2H30 cut 4	3'-1"	9'-5 1/2"	12'-6 1/2"	22'-0"
5H35 cut 5	2'-2 3/4"	3'-11"	12'-10"	16'-9"
64S2 cut 256	6 1/2"	4'-6 3/4"	38'-8 1/4"	43'-3"
*11U26 cut 11	2 3/8"	6'-9 3/8"	9'-2 3/8"	16'-0"
7V5 cut 14	4"	2'-0"	4'-0"	6'-0"
7V8 cut 14	4 3/8"	2'-1 3/8"	4'-1 3/8"	6'-3"
7V13 cut 7	4 1/4"	2'-0 3/4"	4'-2 1/4"	6'-3"
7V14 cut 7	4"	2'-1 1/2"	4'-1 1/2"	6'-3"
13V15 cut 13	5 1/4"	2'-1 1/2"	7'-4 1/2"	9'-6"
13V16 cut 13	5 3/8"	2'-0 3/4"	7'-5 1/4"	9'-6"



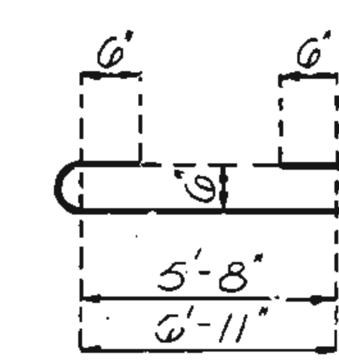
MARK	a	b
C2	13"	13"
F4	2'-0"	3'-7 1/2"
F5	2'-0"	3'-6"
F6	2'-0"	4'-0"
U5	2'-10 1/2"	6 3/4"
U8	6"	2'-9"
U9	6"	4'-6"
U13	2'-9"	6"
U16	2'-9"	6"
U25	2'-10 3/4"	6 3/8"
U26	2'-2 3/8"	2'-3 3/4" to 3'-6 7/16" Int. 1 7/16"



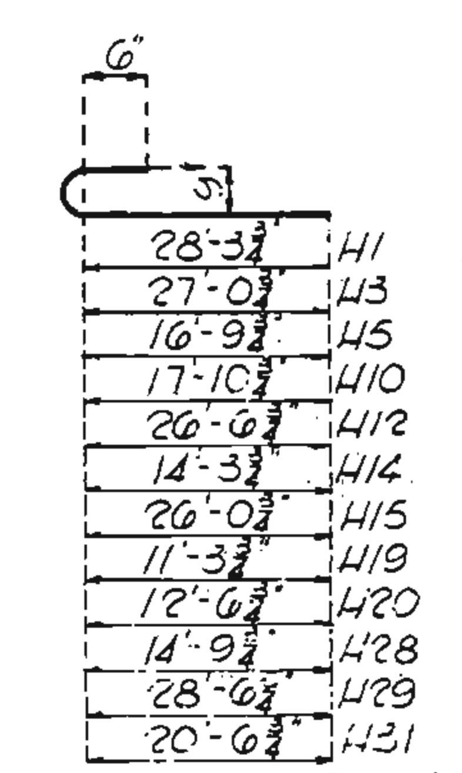
MARK	a	b	c
U11	12 1/2"	2'-2 3/8"	2'-8 7/8"
U12	12 1/2"	2'-5 3/8"	2'-8 1/8"
U14	13 1/4"	2'-7"	2'-8 3/8"
U15	12 1/4"	2'-6"	2'-8 1/8"
U17	14 1/2"	2'-6 3/8"	20 3/8"
U18	13 3/4"	2'-6 5/8"	2'-9"
U19	14 3/4"	2'-7 3/8"	2'-9"
U20	12 1/2"	2'-5 3/4"	2'-9"
U21	13 1/4"	2'-5 3/4"	20 5/8"
U22	13"	2'-8 7/8"	20 5/8"
U23	12 1/4"	2'-8 5/8"	2'-9"
U24	13"	2'-6 3/4"	2'-10 3/4"
U28	13 1/2"	2'-6 3/4"	3'-0"
U29	14"	2'-6 3/4"	3'-2 3/4"



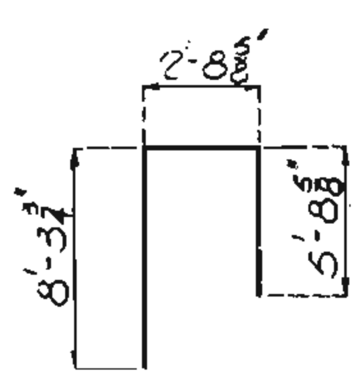
MARK	A	B	C	D	E
U1	14 3/8"	3'-4 1/2"	2'-10 1/2"	2'-7 1/2"	2'-8 3/8"
U2	12 1/2"	3'-4 1/2"	2'-10 1/2"	2'-11 1/2"	3'-0"
U3	14 1/4"	3'-4 1/2"	2'-10 1/2"	2'-10 3/8"	2'-11 1/8"
U4	12 1/4"	2'-5 1/2"	25 1/2"	2'-10 3/8"	2'-11 1/8"
U10	13 3/4"	2'-5 1/2"	23 1/2"	2'-8 3/8"	2'-8 3/8"
U27	12 3/8"	2'-5 1/2"	23 1/2"	2'-7 1/2"	2'-8 3/8"



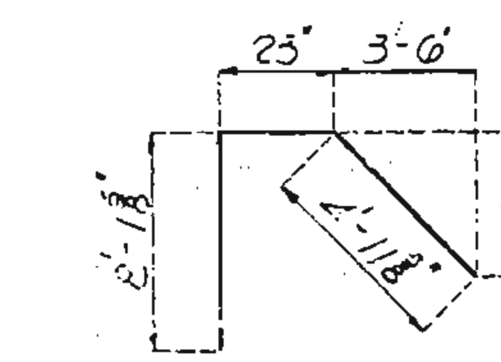
F7 & F9



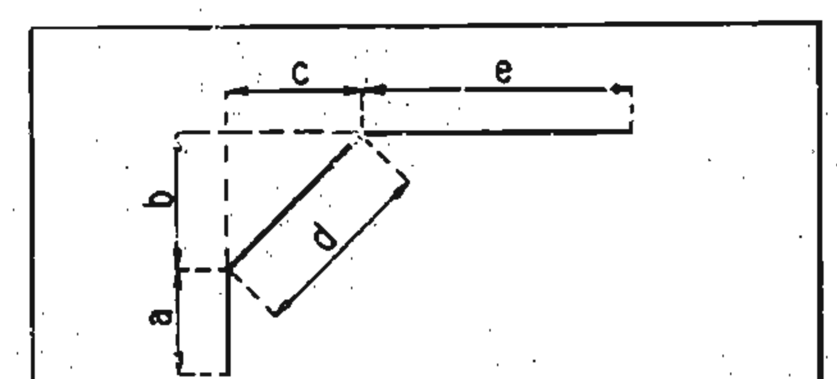
H1, H3, H5, H10, H12, H14
H15, H19, H20, H28, H29 & H31



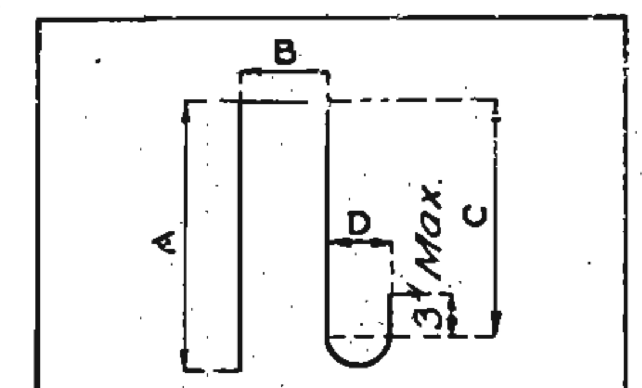
U6



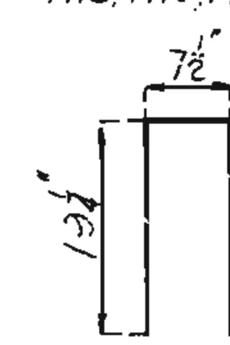
U7



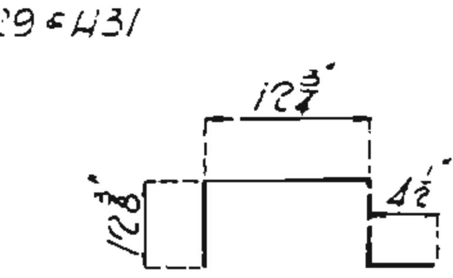
MARK	a	b	c	d	e
T1	21"	2'-3"	6'-10 3/4"	7'-3"	2'-0"
T3	21"	2'-3 1/2"	6'-5 3/4"	6'-10 1/2"	22 1/2"
T5	21"	2'-5"	6'-5 3/4"	6'-11"	2'-1"
T6	21"	2'-5 1/4"	6'-11 1/2"	7'-4 1/2"	2'-1 1/2"
T7	21"	5'-5 1/4"	12'-1"	13'-3"	2'-0"
T8	21"	5'-4 5/8"	12'-1"	13'-2 3/4"	2'-0 1/4"



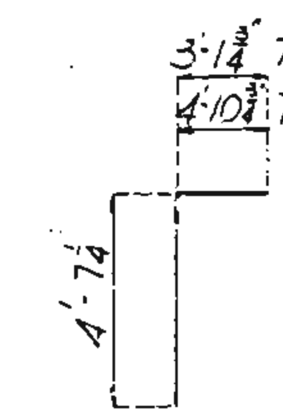
MARK	A	B	C	D
R8	23 1/2"	7 1/2"	20 1/2"	6"



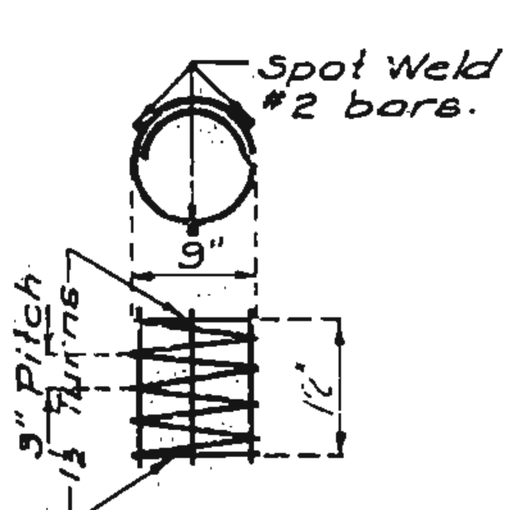
R12



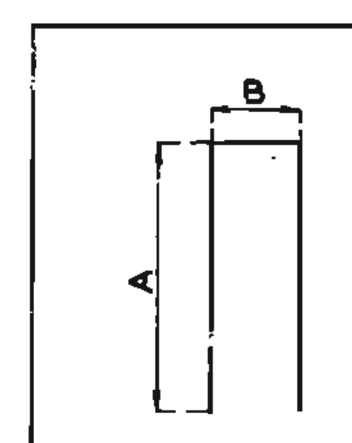
C1



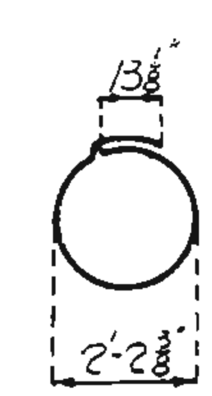
T2 & T4



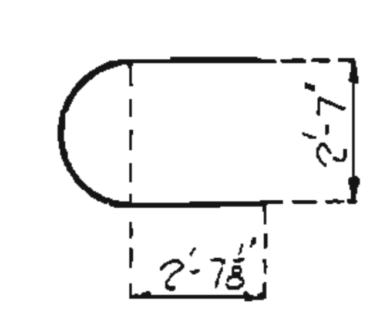
W1



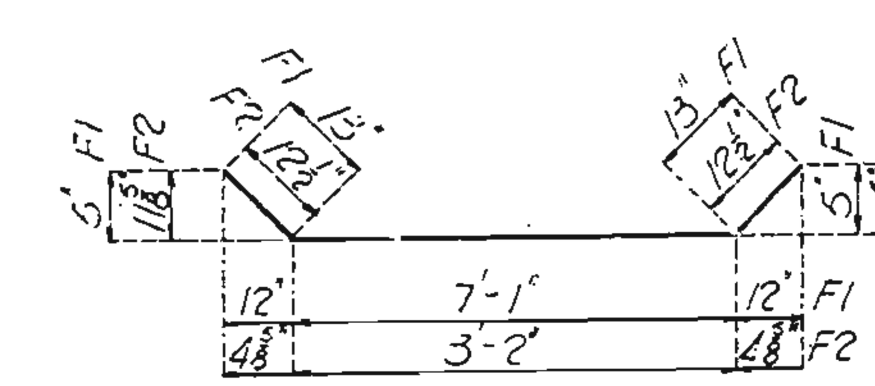
MARK	A	B
R2	2'-7 1/2"	9"
R3	2'-10 1/2"	9"
R4	3'-0"	9"
R5	3'-1 1/2"	9"
R6	3'-3"	9"
R7	3'-4 1/2"	9"
R10	4'-8 1/4"	7 1/2"



P1



H18



F1 & F2

BRIDGE
STATE ROAD
ABOUT
PROJECT NO.
STA.
STE. GENEVIEVE
COUNTY

BOPP & SALLER & ASSOCIATES, INC.

DETAILED OCT. 1968 BY M.J.S.
CHECKED OCT. 1968 BY A.J.S.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3 of 13.

A-2269

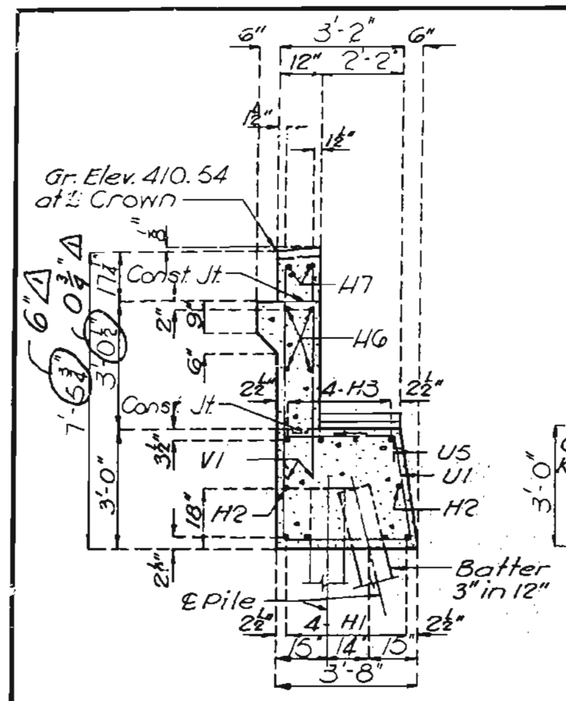
STD. 90.4 | AUG. 1963 | REVISED | NOV. 1967

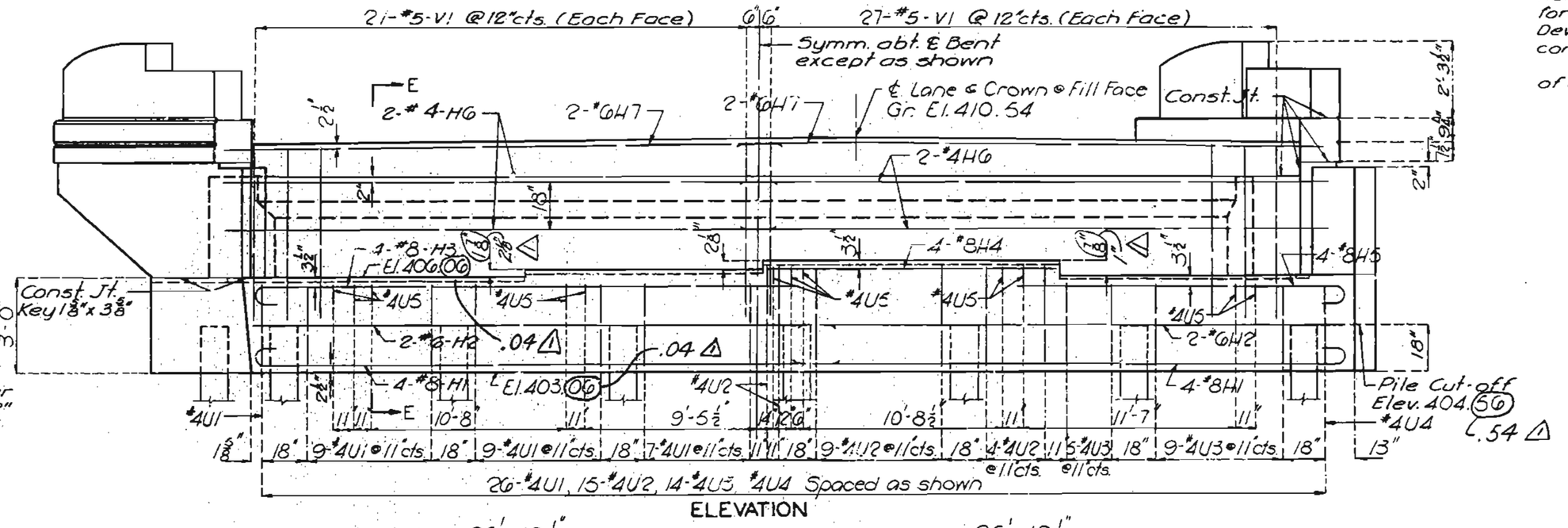
3/3

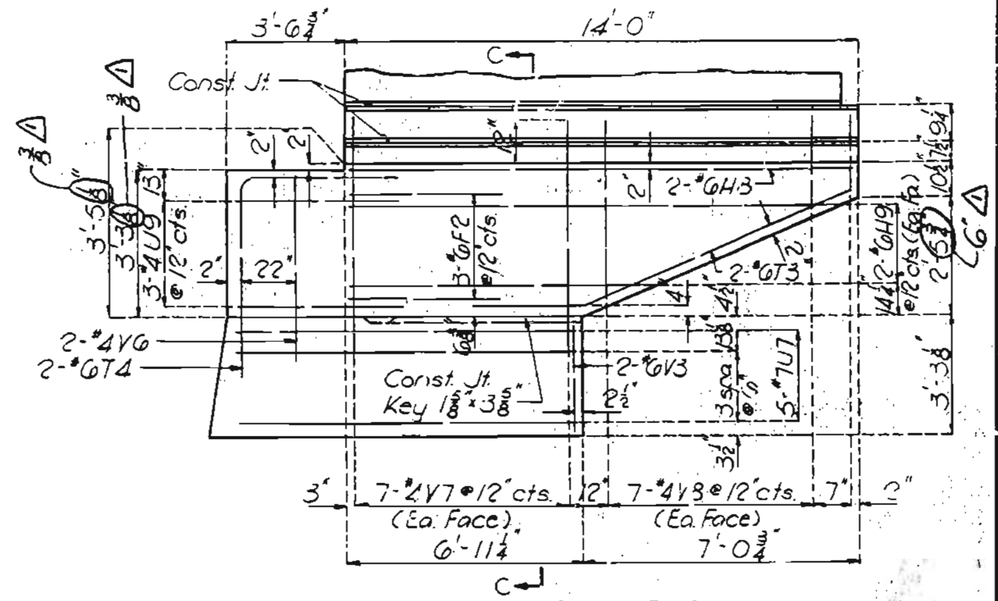
MISSOURI STATE HIGHWAY DEPARTMENT

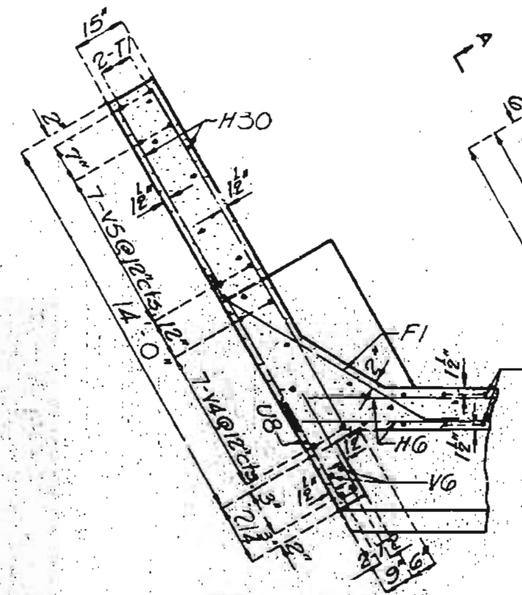
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
5	MO		19	21Y	

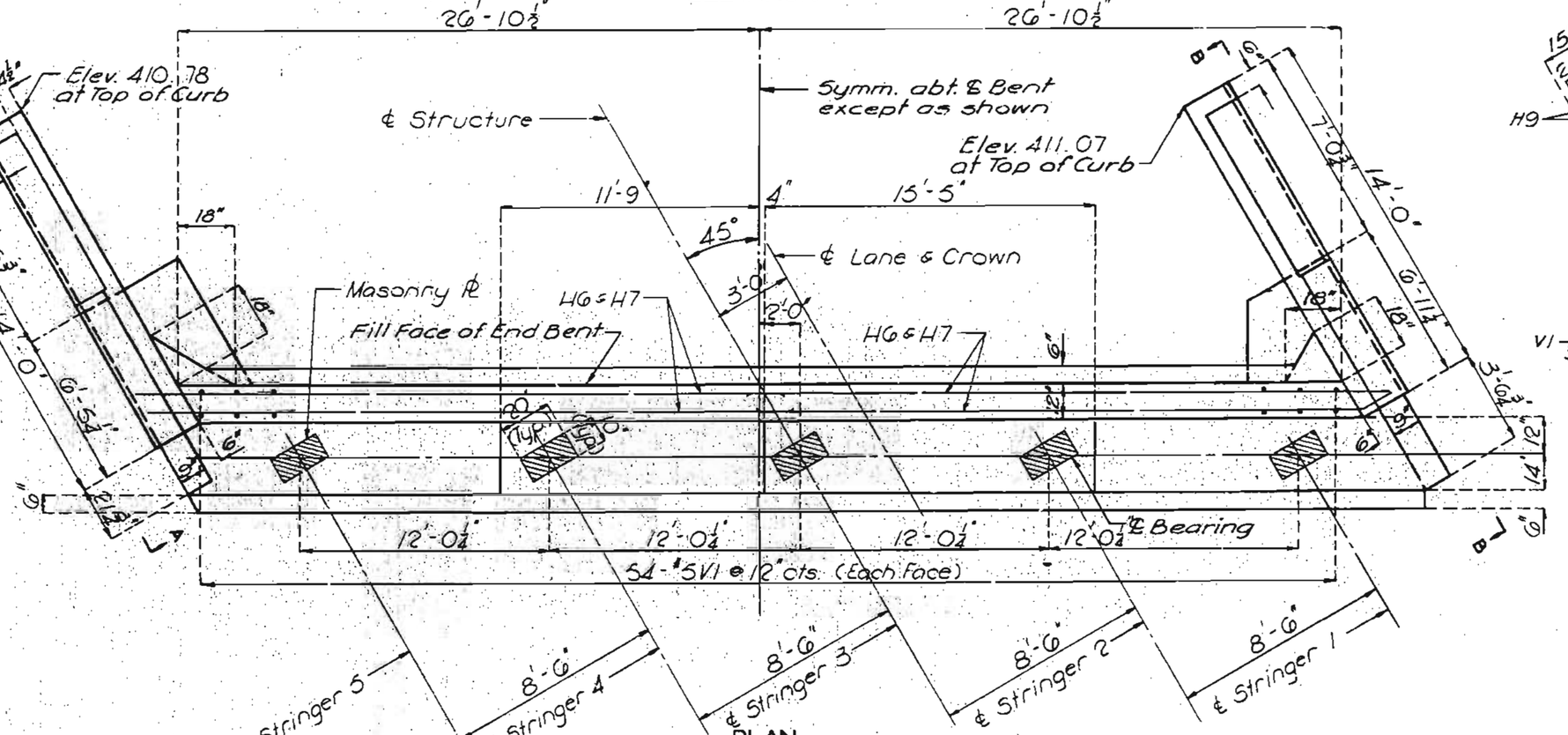
Note: Field bending shall be required at wings for #6-H7 bars in backwalls with Expansion Device and for F1 bars when necessary to conform to slope of wing.
See handrail sheet for reinforcement of end posts, parapets and curbs.

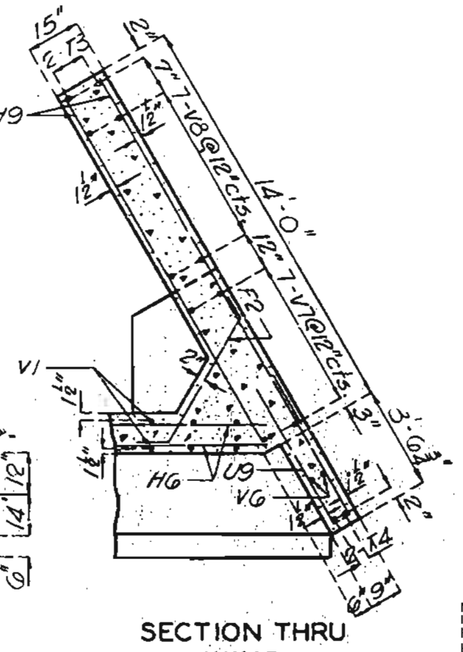


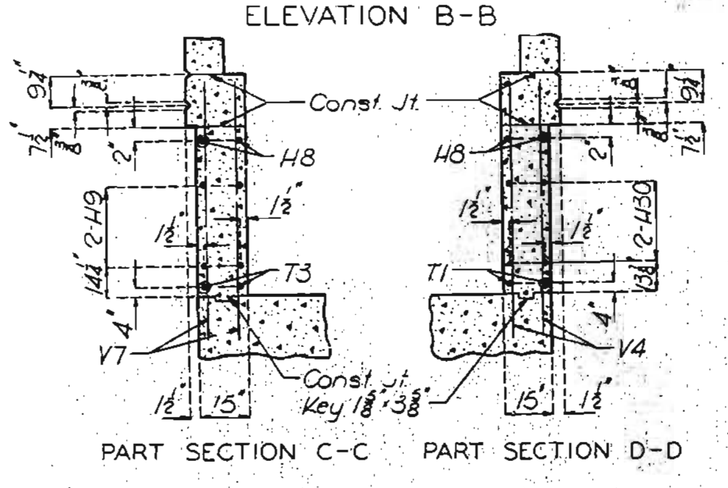


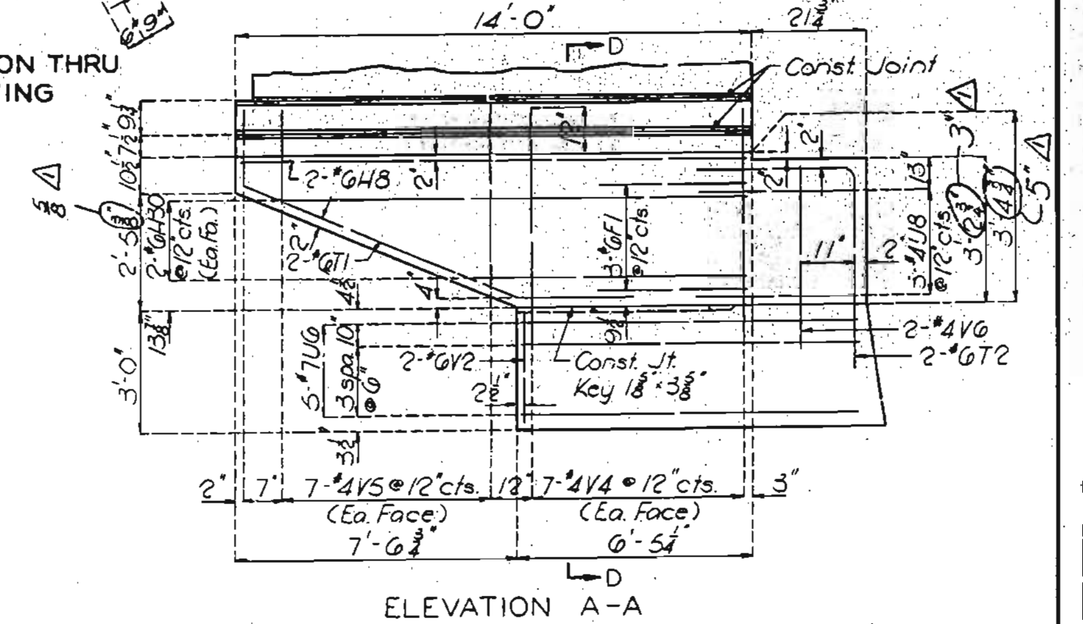


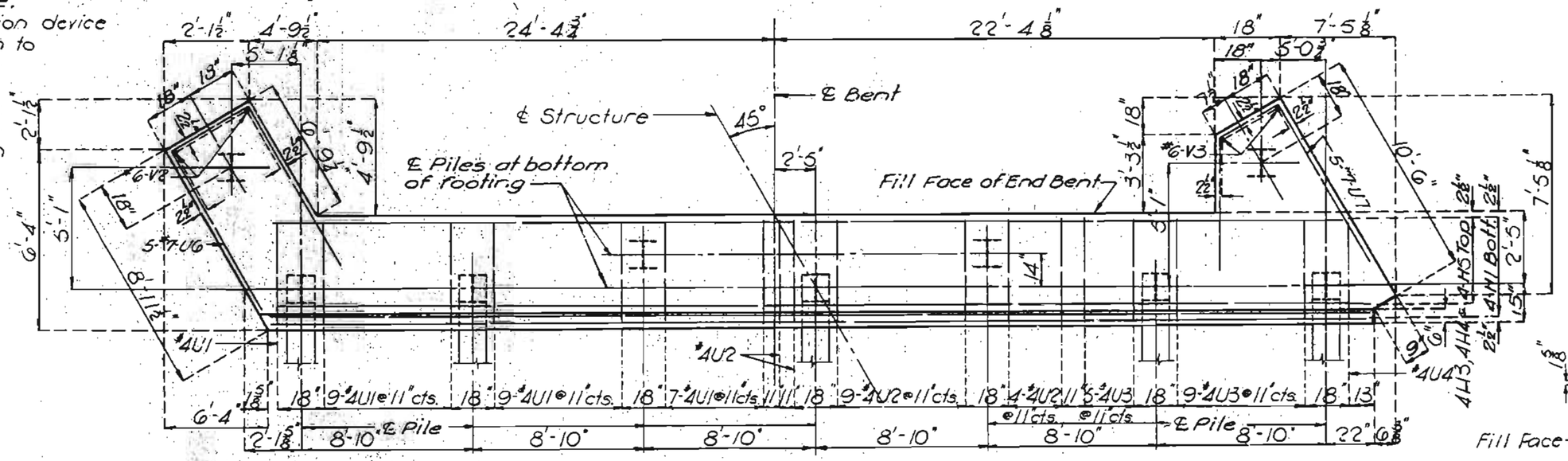






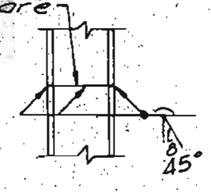




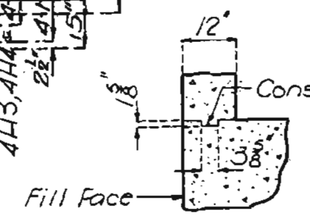


Notes: Fill at end bent No. 1 shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.
Top of backwall and expansion device for End Bents No. 1 & 6 to conform to crown of roadway slab.
Backwall above upper construction joint shall not be poured until the structural steel of the expansion device has been installed and slab has been poured in adjacent span.
For Anchor Bolt Plan see sheet 10 of 13.

Butt splice (if required) Top of lower section to be cut square



STEEL PILE SPLICE



DETAIL OF KEYED CONST. JOINT

BRIDGE
STATE ROAD
ABOUT
PROJECT NO.
STA.
COUNTY
STE. GENEVIEVE

△ - Rev. Mar. 12, 1970

BOPP & SALLER & ASSOCIATES, INC.
DETAILED OCT. 1968 BY M.J.S.
CHECKED OCT. 1968 BY A.J.S.

REVISED	JAN. 1968
STD. 12.3	APRIL 1965

DETAILS OF END BENT NO. 1 RIGHT LANE

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 4 of 13.

A-2269

A2269R, Sht. 4

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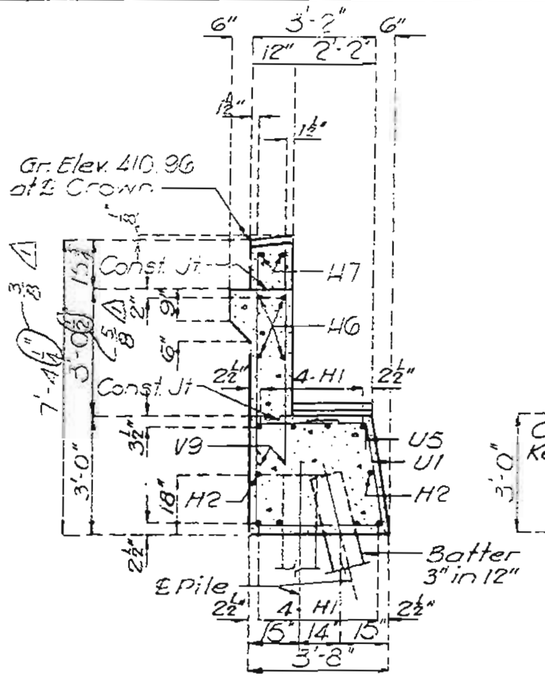
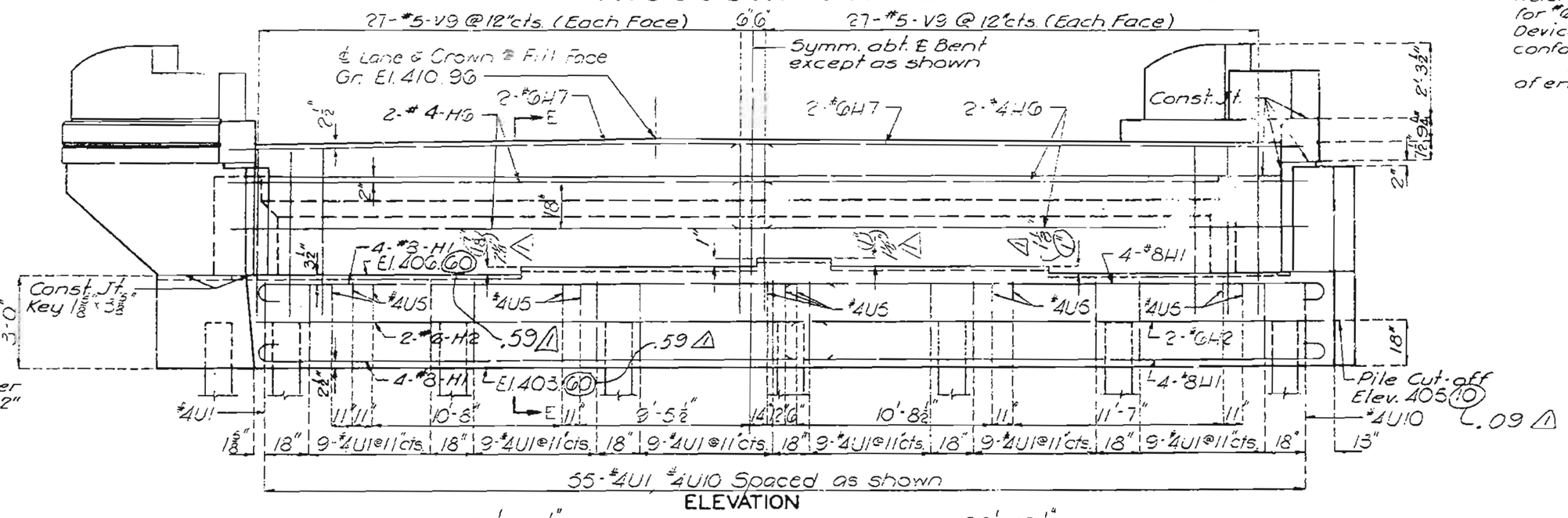
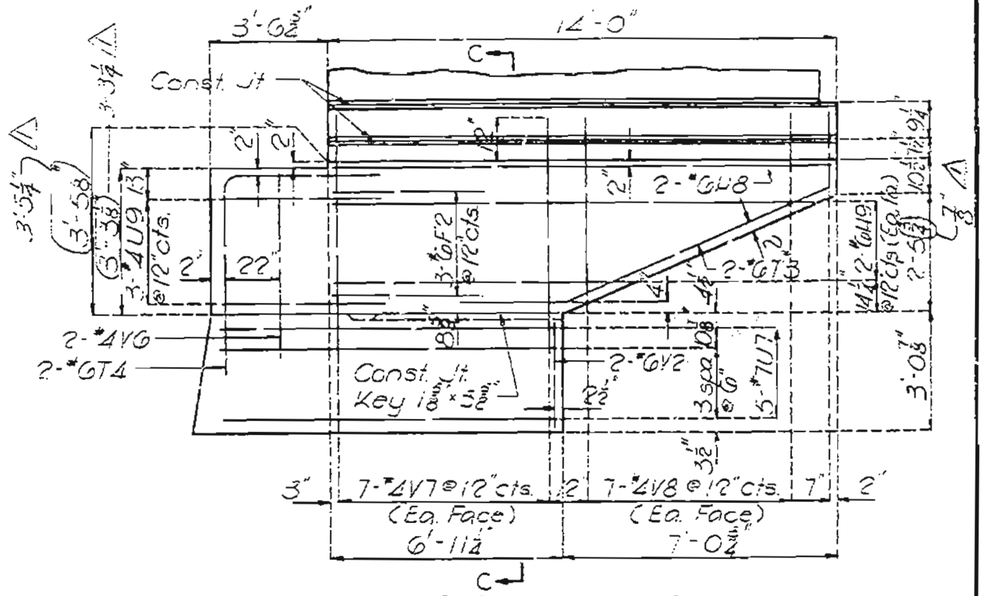
MISSOURI STATE HIGHWAY DEPARTMENT

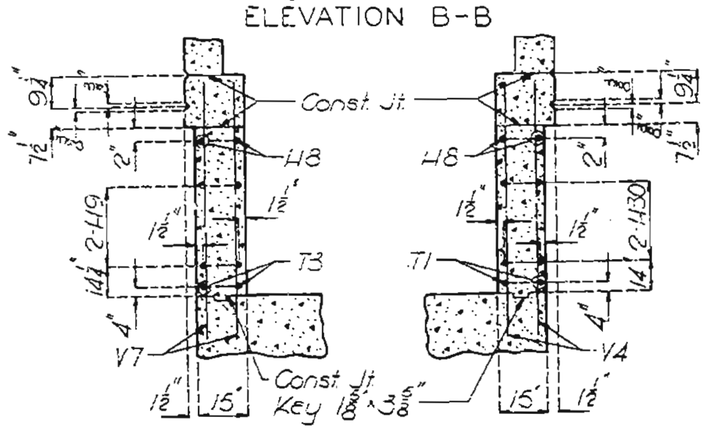
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19		

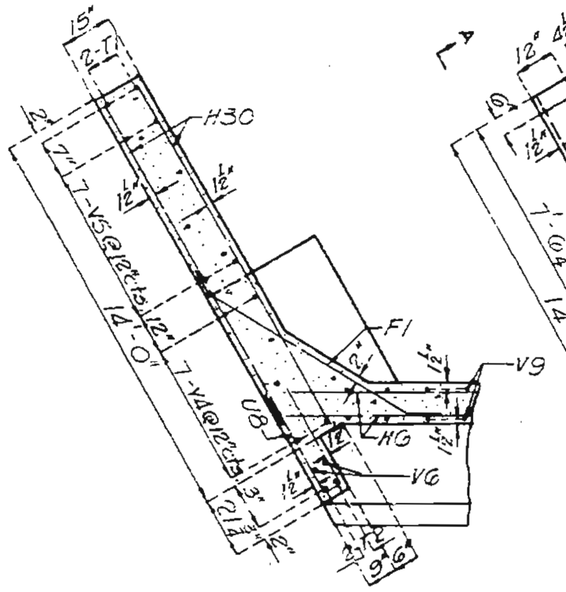
Note: Field bending shall be required at wings for #6 H7 bars in backwalls with Expansion Device and for F1 bars when necessary to conform to slope of wing.
See handrail sheet for reinforcement of end posts, parapets and curbs.

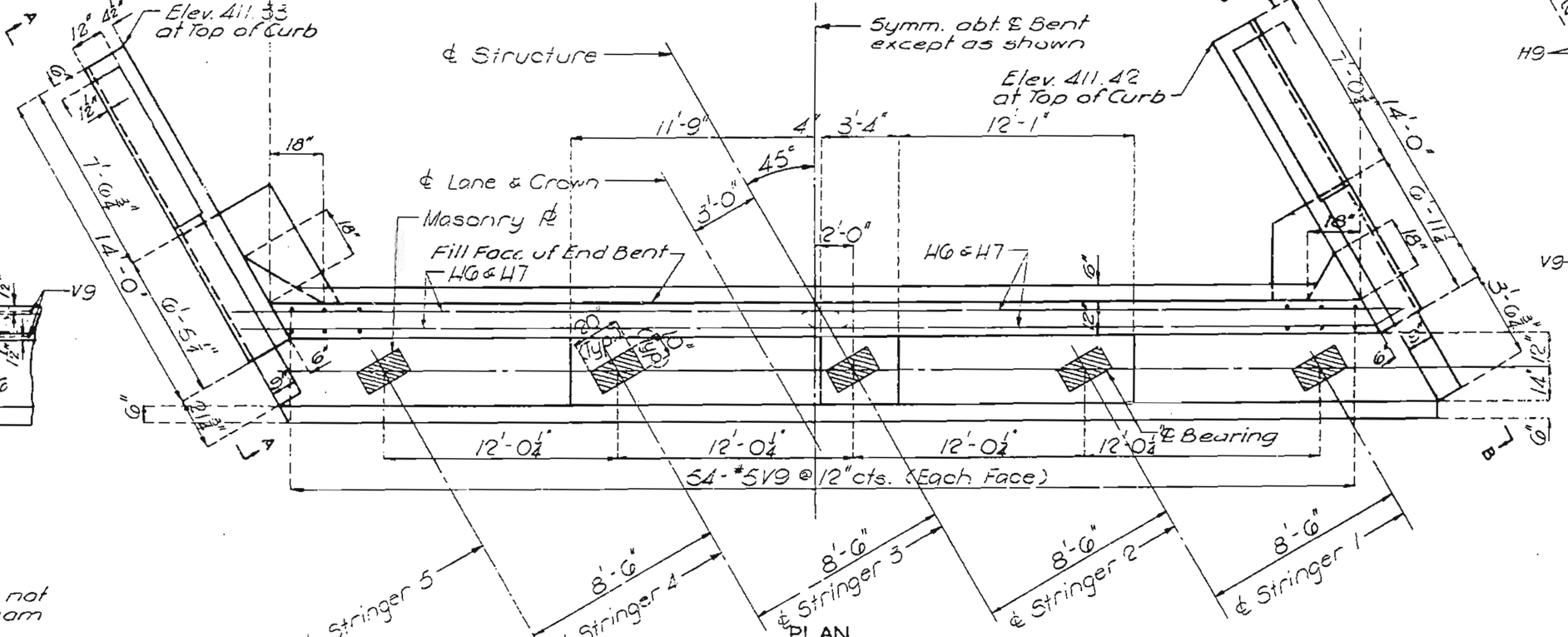


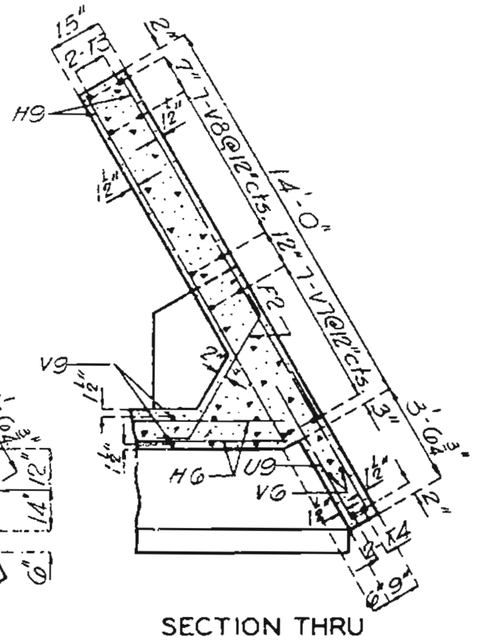




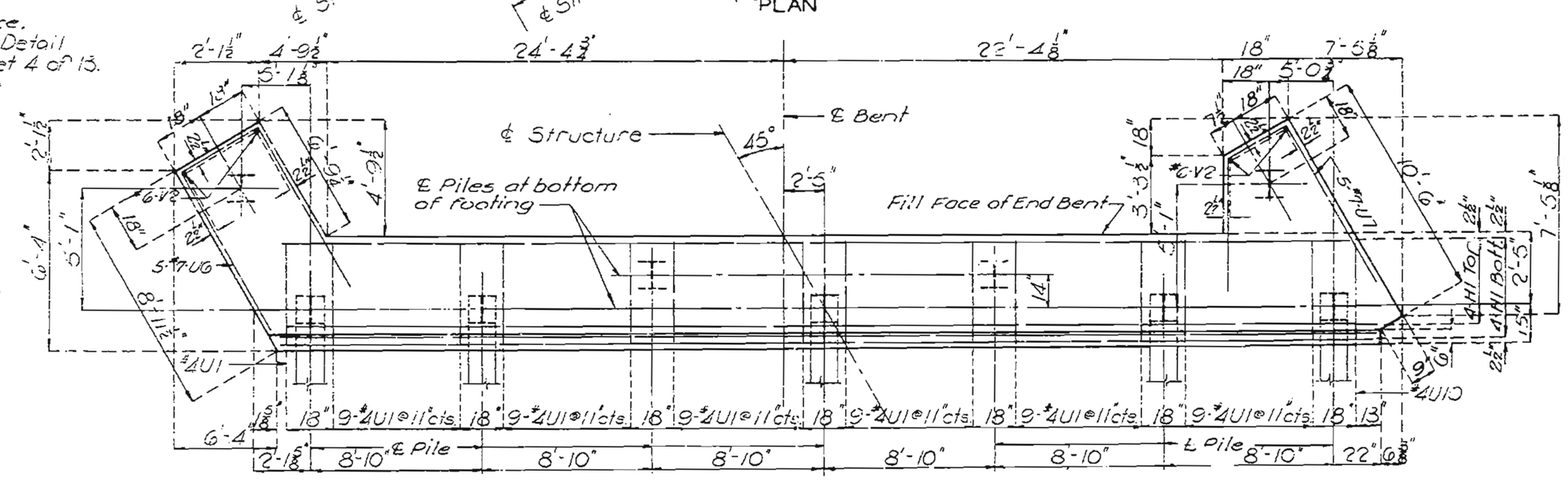




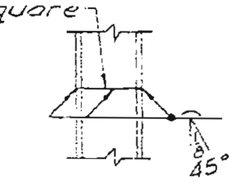




Note: Fill at end bent No. 1 shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.
For additional notes and Detail of Keyed Const. Joint see sheet 4 of 13.
For Anchor Bolt Plan see sheet 10 of 13.



Butt splice (if required) top of lower section to be cut square



STEEL PILE SPLICE

BOPP & SALLER & ASSOCIATES, INC.
DETAILED OCT. 1968 BY M.J.S.
CHECKED OCT. 1968 BY A.J.S

STD. 12.3	REVISED
APRIL 1965	JAN. 1968

DETAILS OF END BENT NO. 1 LEFT LANE

Note: This drawing is not to scale. Follow dimensions

½" - Rev. Mini. 12, 1970

Sheet No. 5 of 13

BRIDGE
STATE ROAD
ABOUT
PROJECT NO. STA.
STE. GENEVIEVE COUNTY

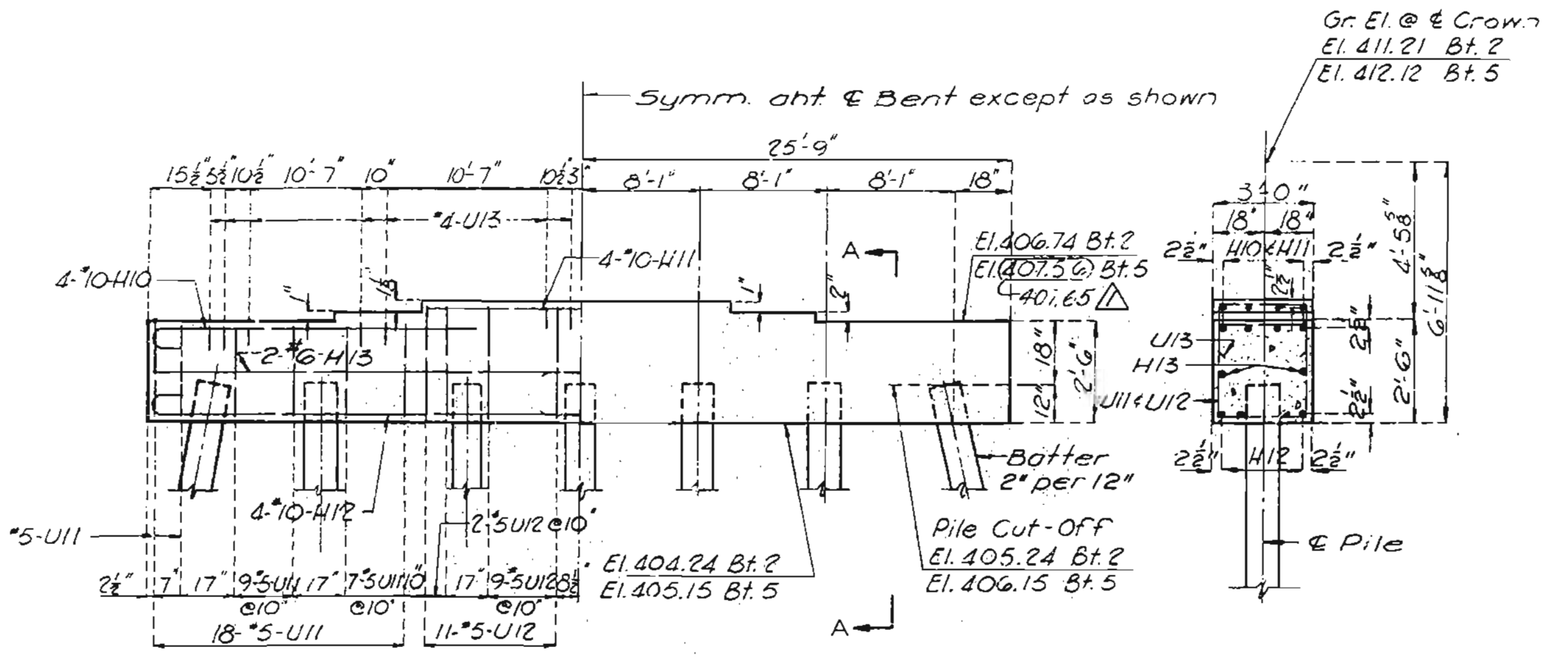
A-2269

FOR INFORMATION ONLY

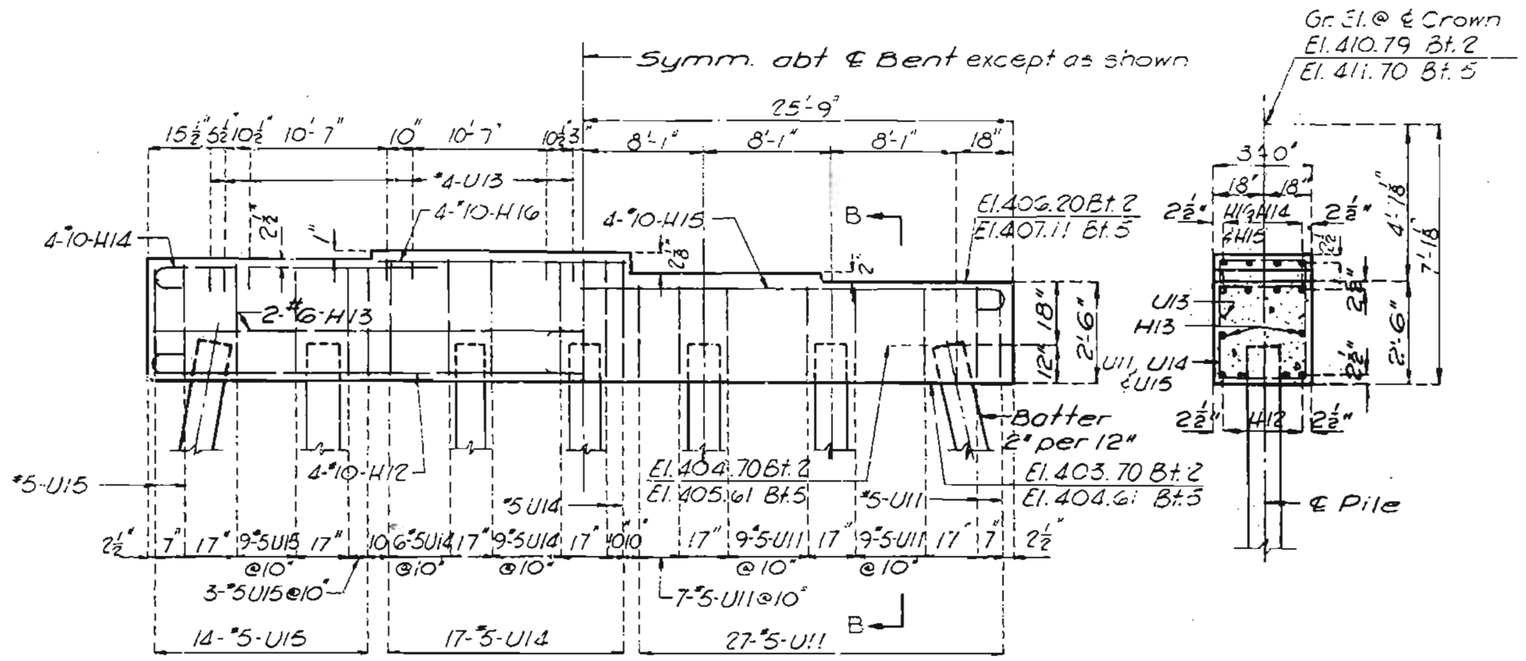
A2269R, Sht. 5

MISSOURI STATE HIGHWAY DEPARTMENT

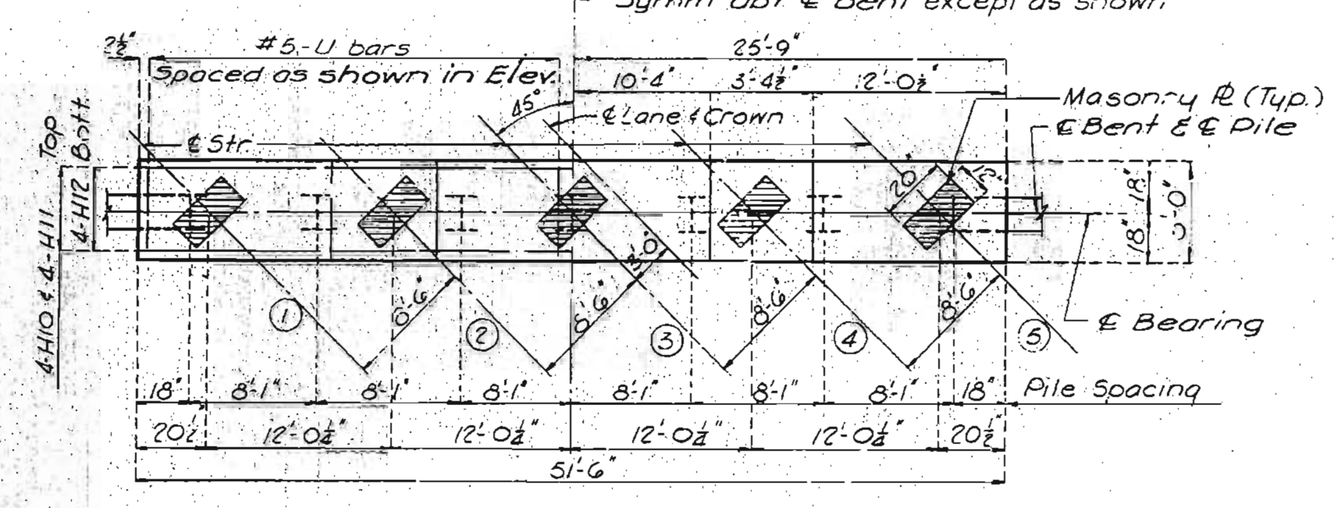
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	2[illegible]	



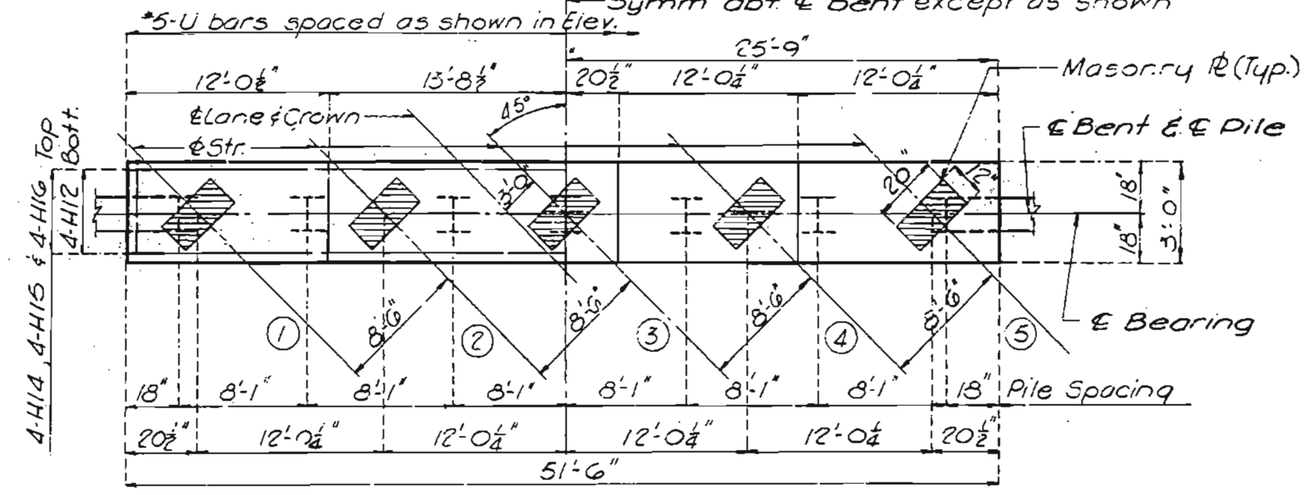
ELEVATION SECTION A-A



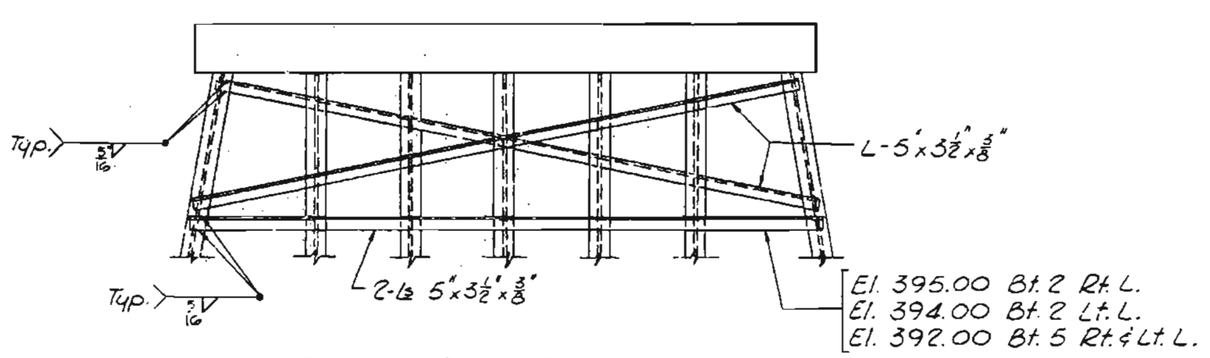
EL.EVATION SECTION B-B



PLAN
DETAILS OF INTERMEDIATE BENT NO. 2 & 5
LEFT LANE



PLAN
DETAILS OF INTERMEDIATE BENT NO. 2 & 5
RIGHT LANE



SWAY BRACING DETAILS

BRIDGE
STATE ROAD
ABOUT
PROJECT NO. **STA.**
STE. GENEVIEVE **COUNTY**

BOPP & SALLER & ASSOCIATES, INC.
DETAILED OCT. 1968 BY W.C.H.
CHECKED OCT. 1968 BY A.J.S.

Note: This drawing is not to scale. Follow dimensions.

1 - Rev. 4-7-70

Sheet No. 6 of 13

A-2269

SEE FINAL PLANS SHEET-LINES

316

No.	Date	Revised
9.6	Mar. 1964	June 1965

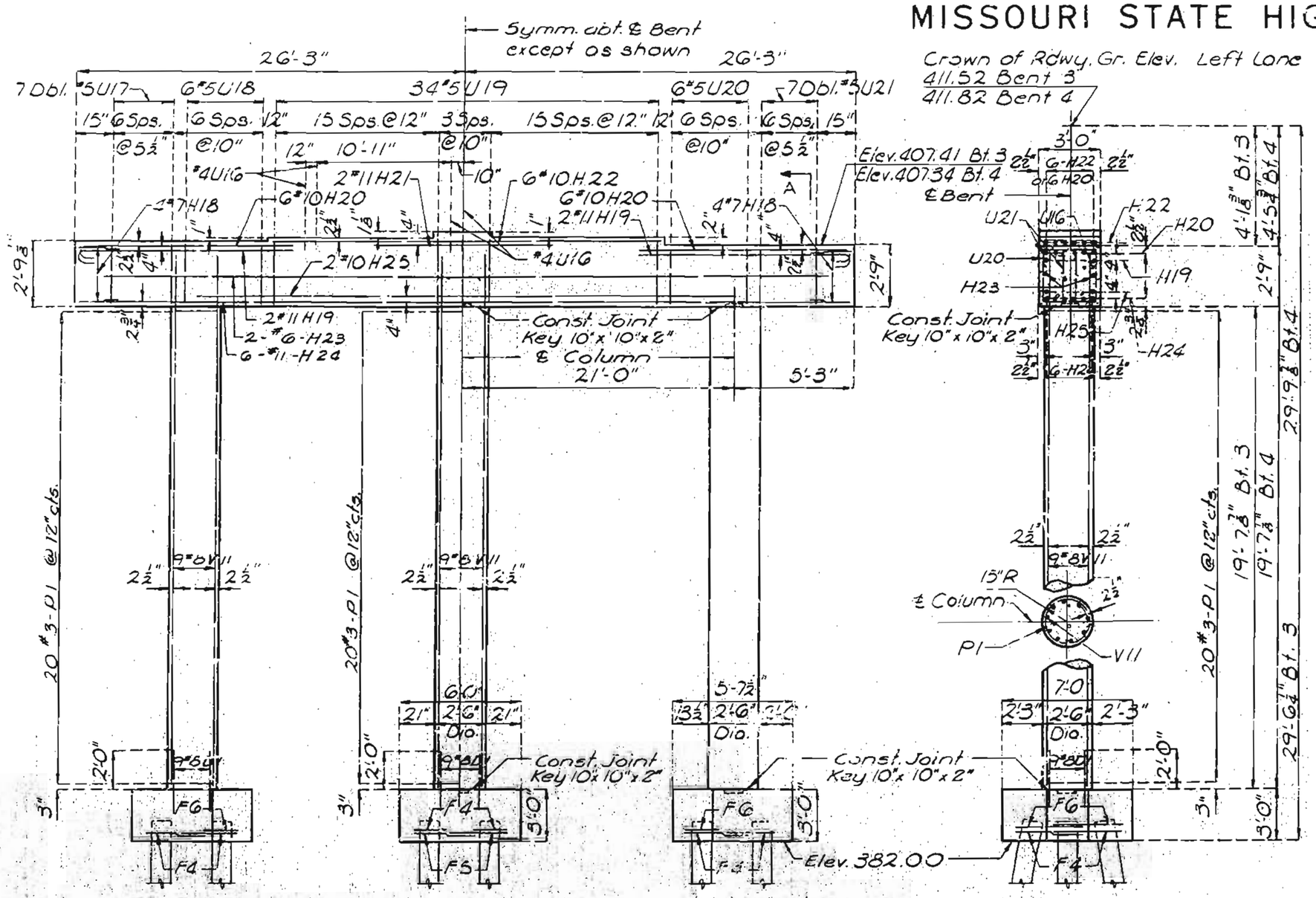
FOR INFORMATION ONLY

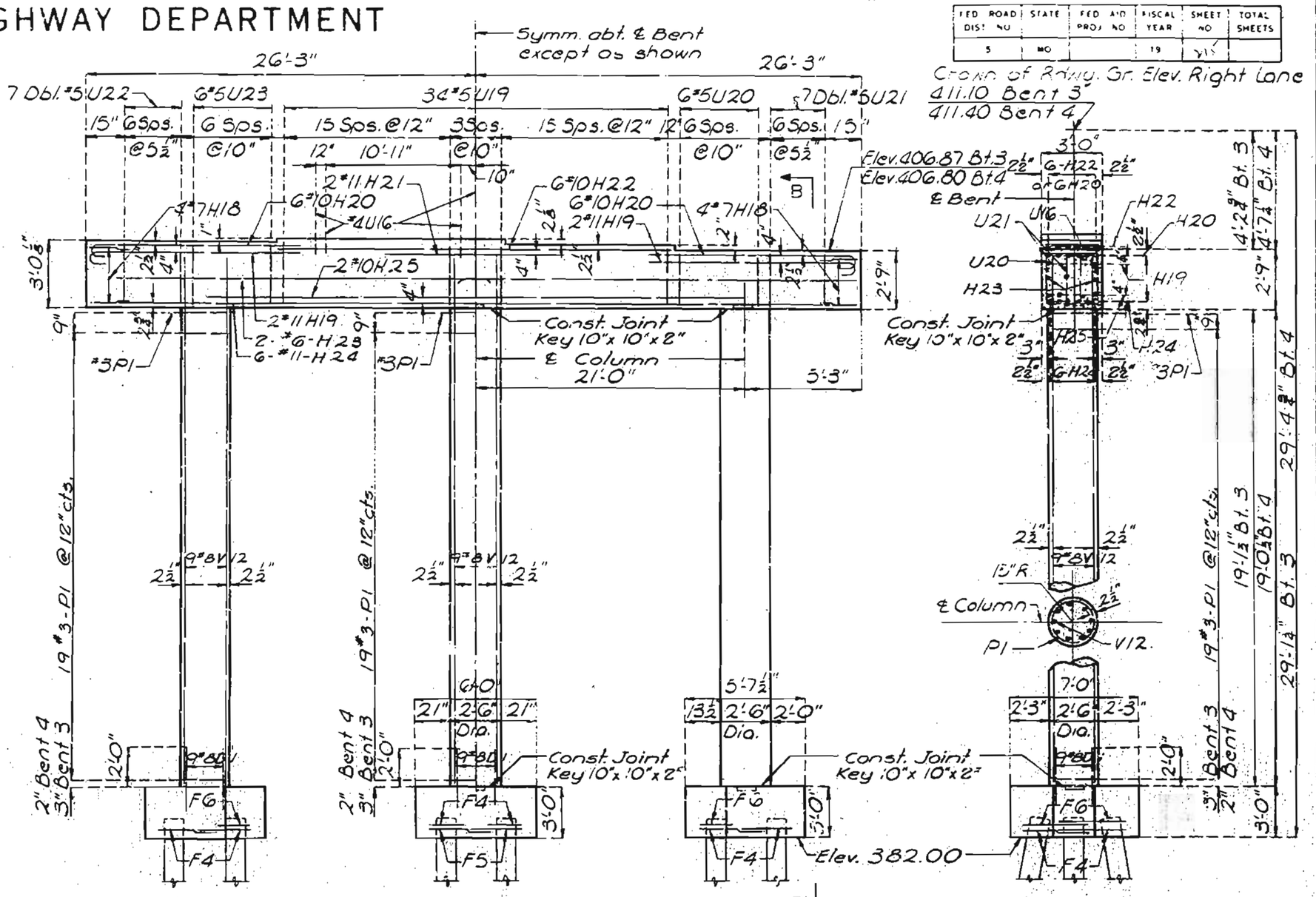
A2269R, Sht. 6

MISSOURI STATE HIGHWAY DEPARTMENT

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
5	MO		19		

FOR INFORMATION ONLY





Note: All batter piles to have a 2", in 12" batter.

BRIDGE

STATE ROAD

ABOUT

PROJECT NO

STE. GENEVIEVE

STA.

COUNTY

A-2269

No.	Revised
19.6	Jan. 1965
Sept. 1962	

DETAILED OCT. 1968 BY H.L.M.

CHECKED OCT. 1968 BY A.J.S.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 7 of 13

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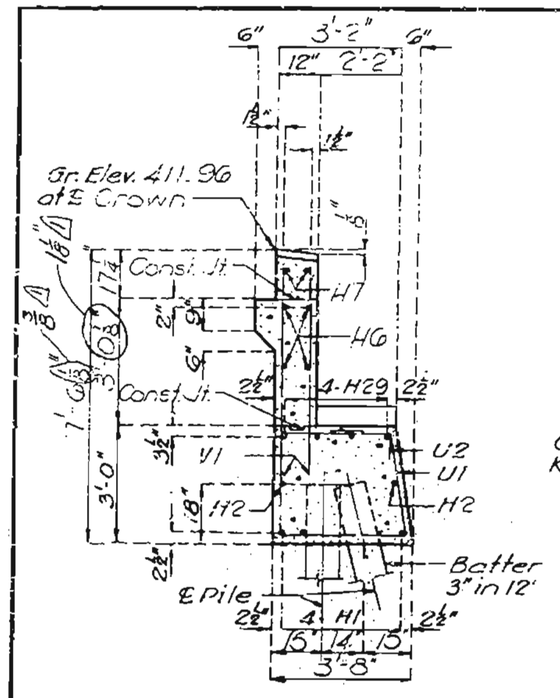
A2269R, Sht. 7

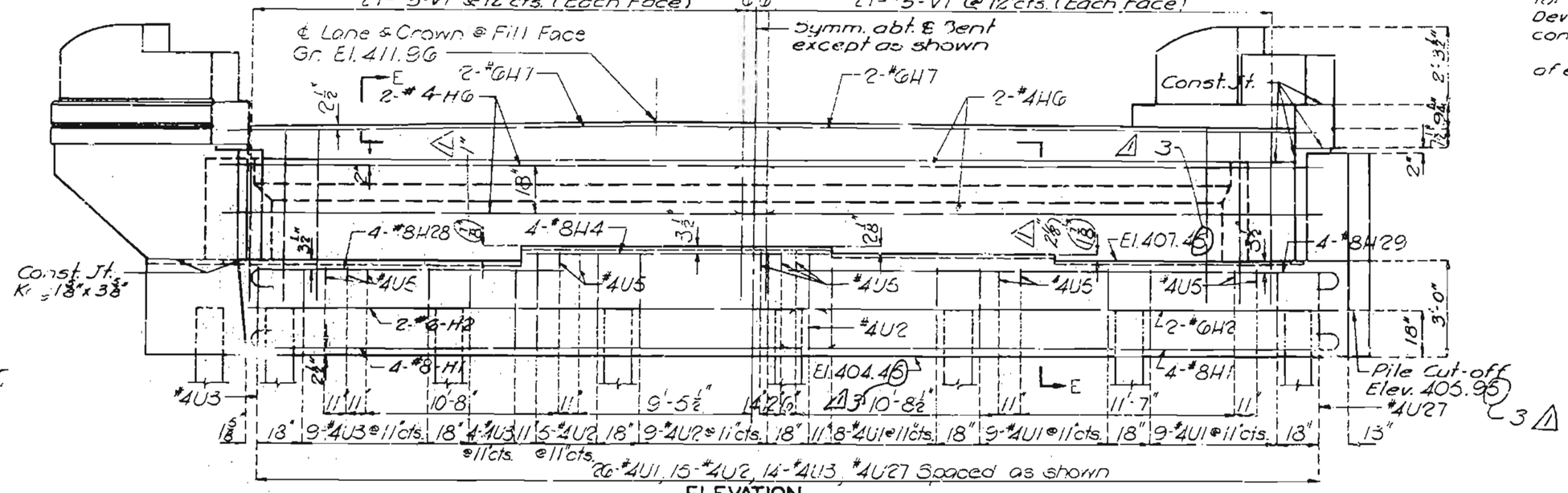
MISSOURI STATE HIGHWAY DEPARTMENT

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
5	MO		19	XIV	

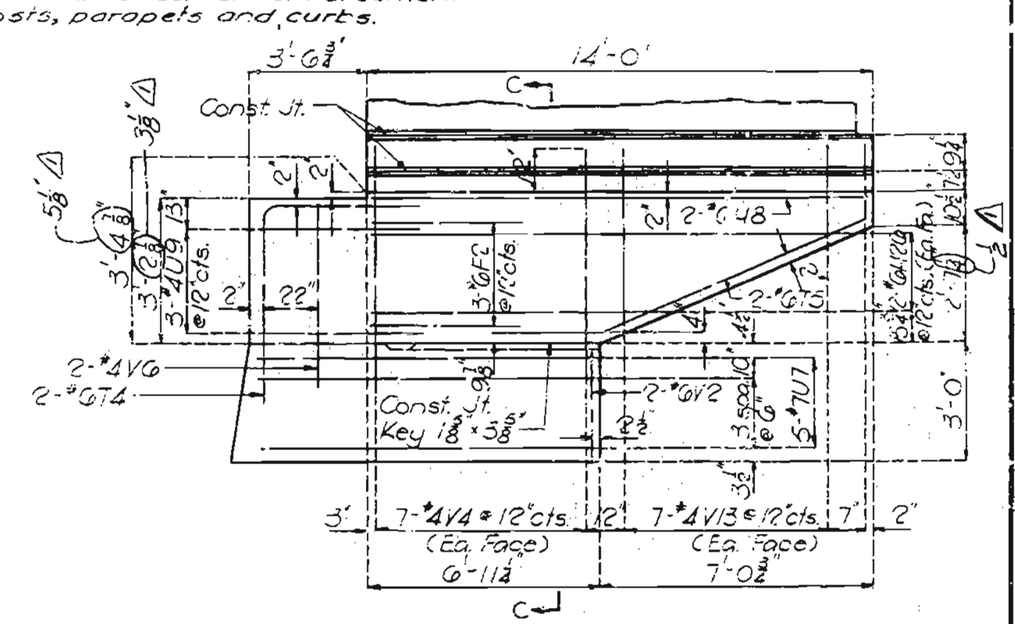
Note: Field bending shall be required at wings for #6 H7 bars in backwalls with Expansion Device and for F1 bars when necessary to conform to slope of wing.
See handrail sheet for reinforcement of end posts, parapets and curbs.



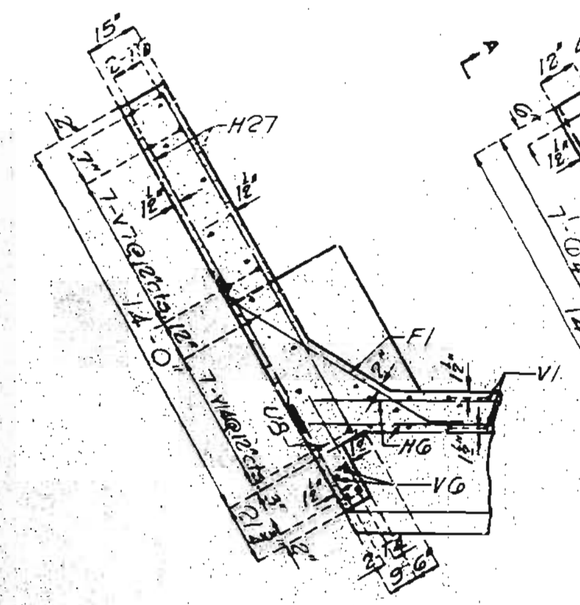
SECTION E-E



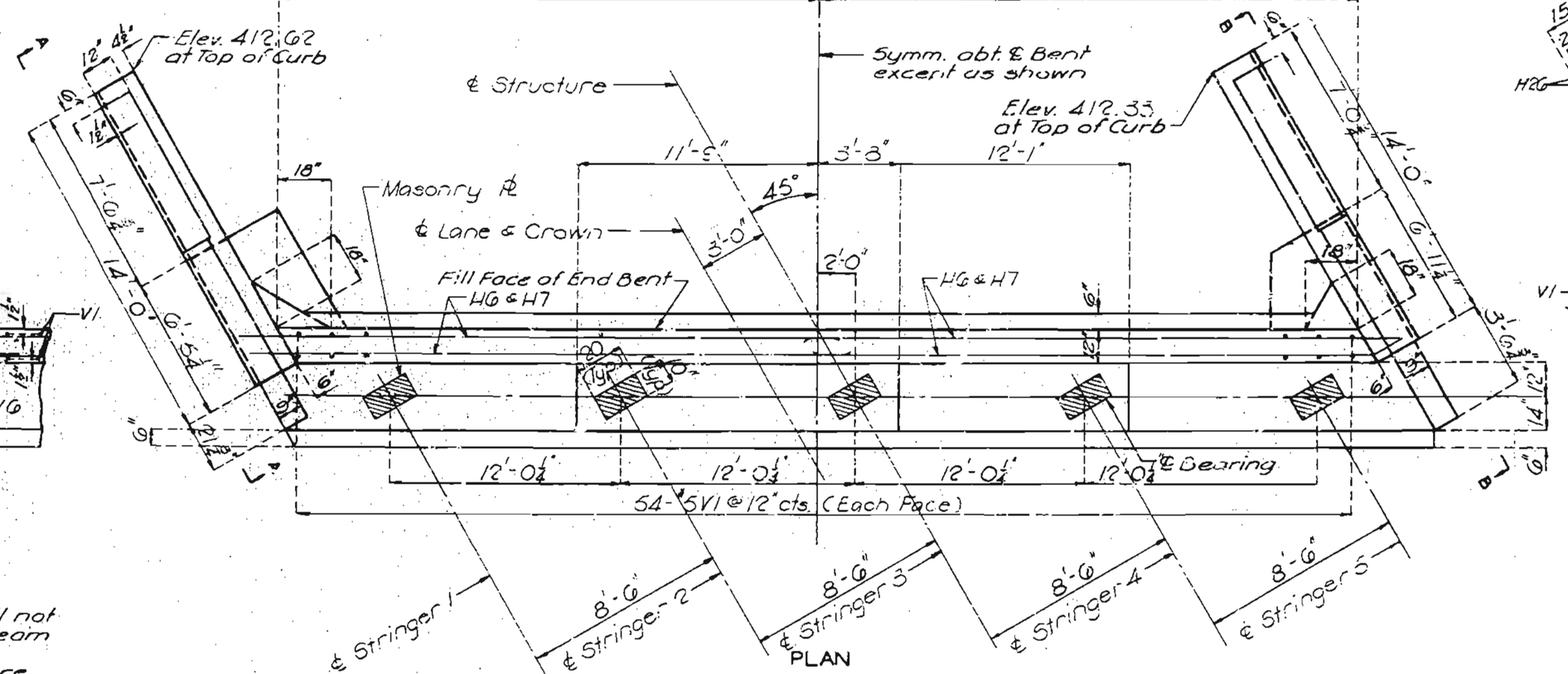
ELEVATION



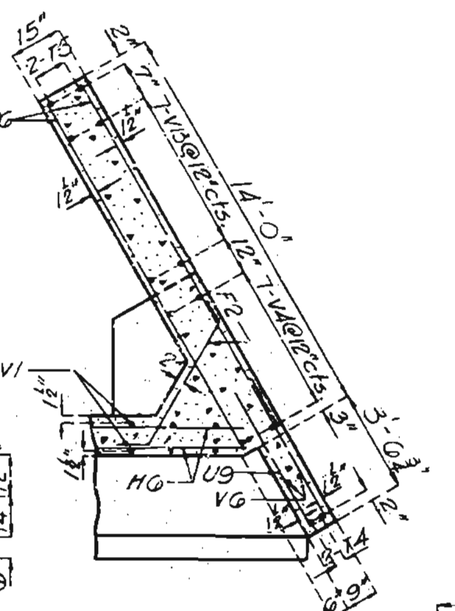
ELEVATION B-B



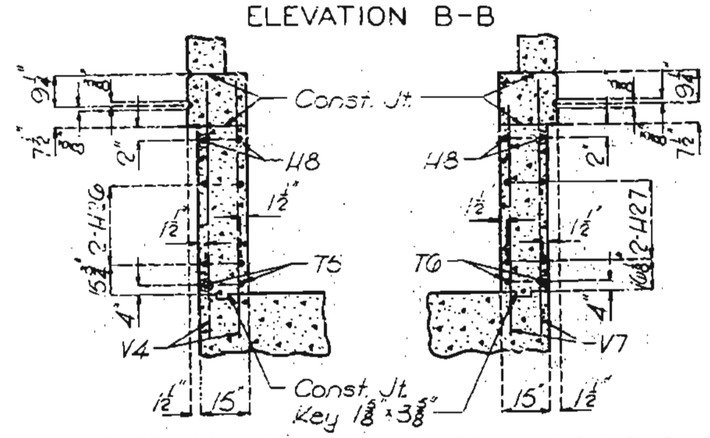
SECTION THRU WING



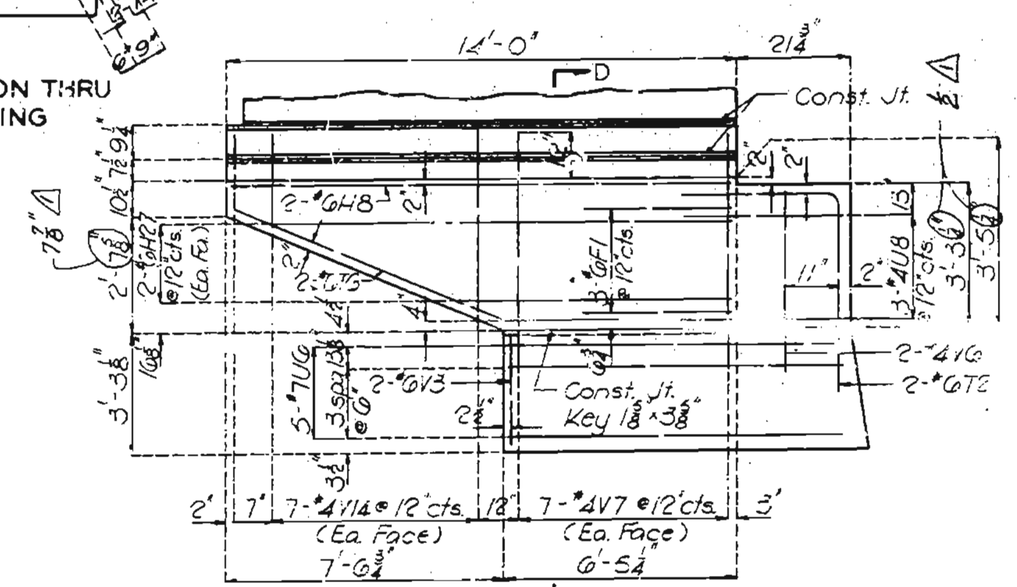
PLAN



SECTION THRU WING



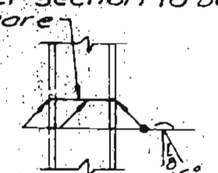
PART SECTION C-C PART SECTION D-D



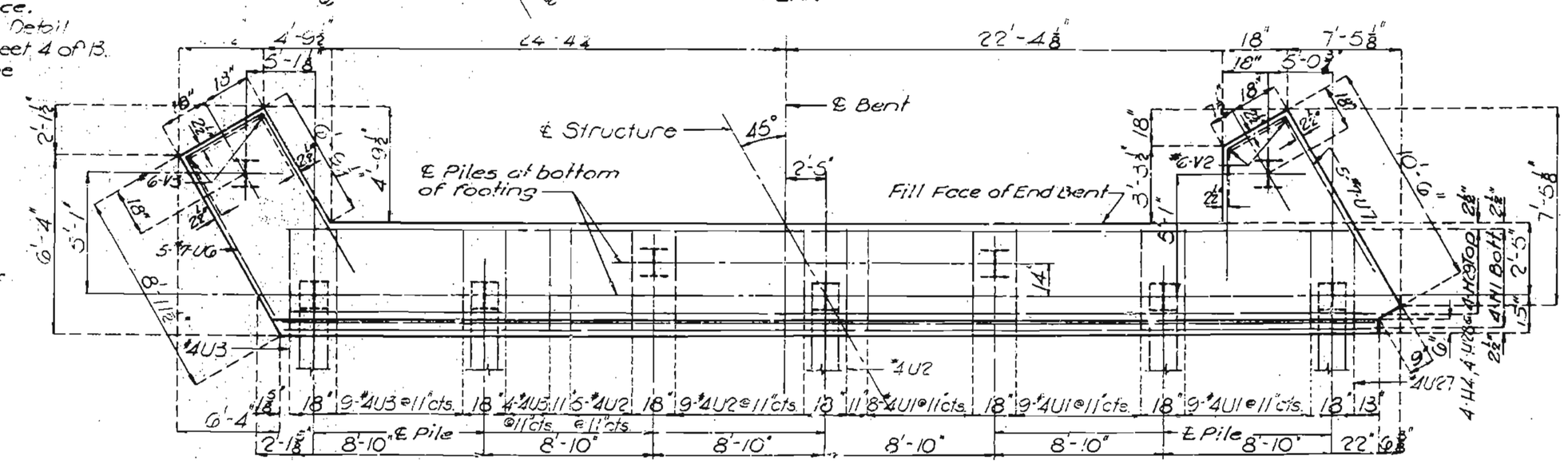
ELEVATION A-A

Note: Fill at end bent No. 6 shall not be carried above bottom of beam and wings until adjacent superstructure span is in place.
For additional notes see Detail [illegible] Sheet 4 of 13.
For Anchor Bolt Plan see sheet 10 of 13.

Butt splice (if required) Top of lower section to be cut square



STEEL PILE SPLICE



PLAN OF BEAM

DETAILS OF END BENT NO. 6 RIGHT LANE

Note: This drawing is not to scale. Follow dimensions.

BOPP & SALLER & ASSOCIATES, INC.
DETAILED OCT. 1968 BY M.J.S.
CHECKED OCT. 1968 BY A.J.S.

STD. 12.3	REVISED
APRIL 1965	JAN. 1968

△-Rev. Mar. 12, 1970

BRIDGE
STATE ROAD
ABOUT
PROJECT NO. STA.
STE. GENEVIEVE COUNTY

Sheet No. 8 of 13.

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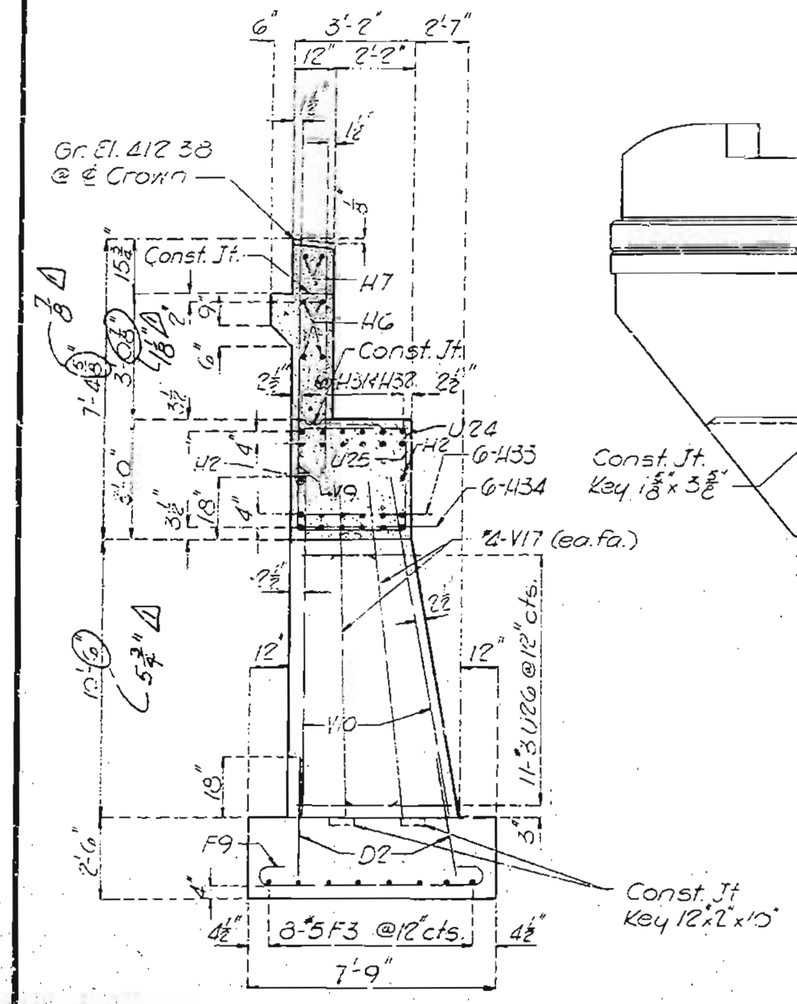
FOR INFORMATION ONLY

A2269R, Sht. 8

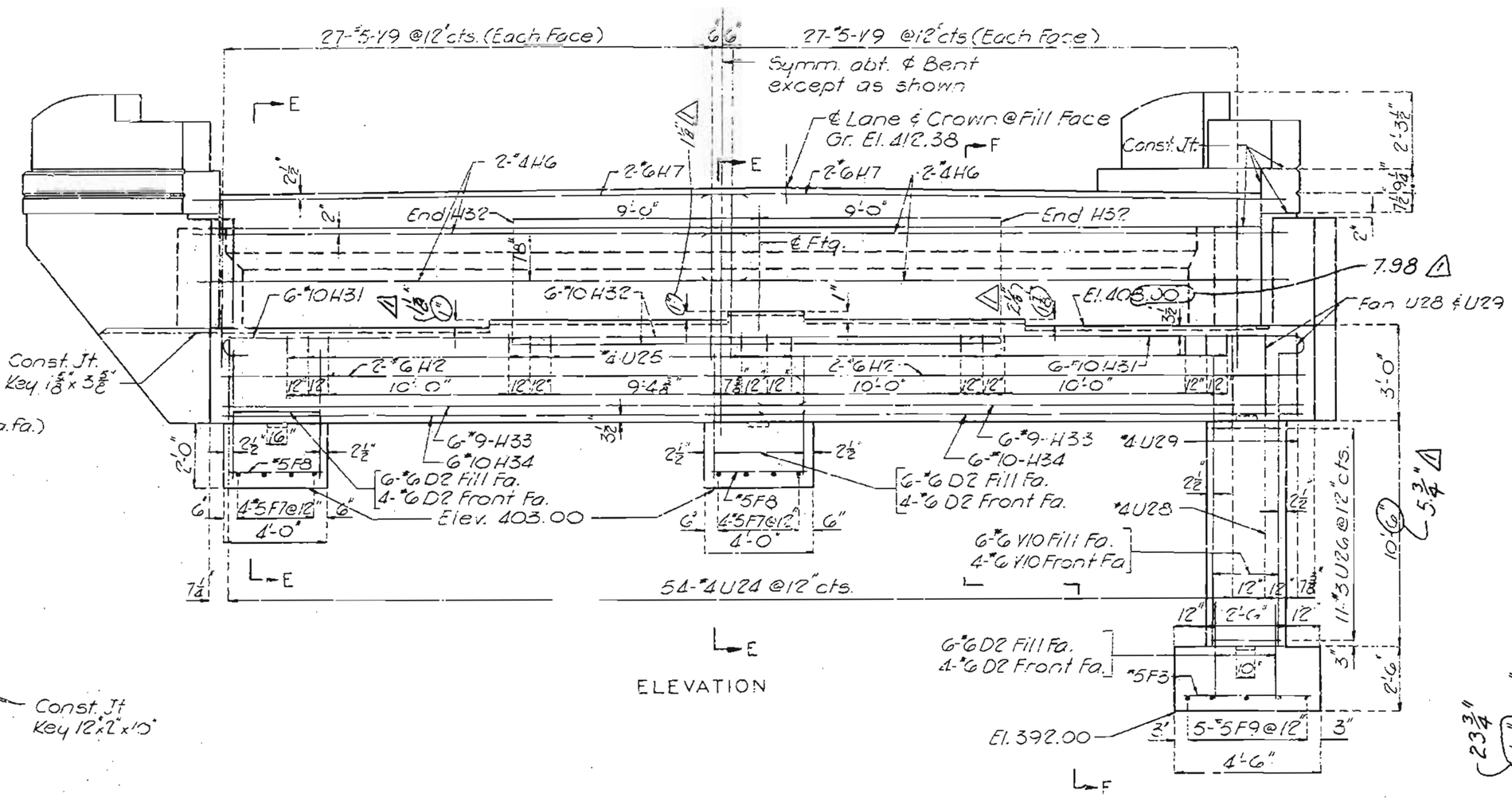
FOR INFORMATION ONLY

MISSOURI STATE HIGHWAY DEPARTMENT

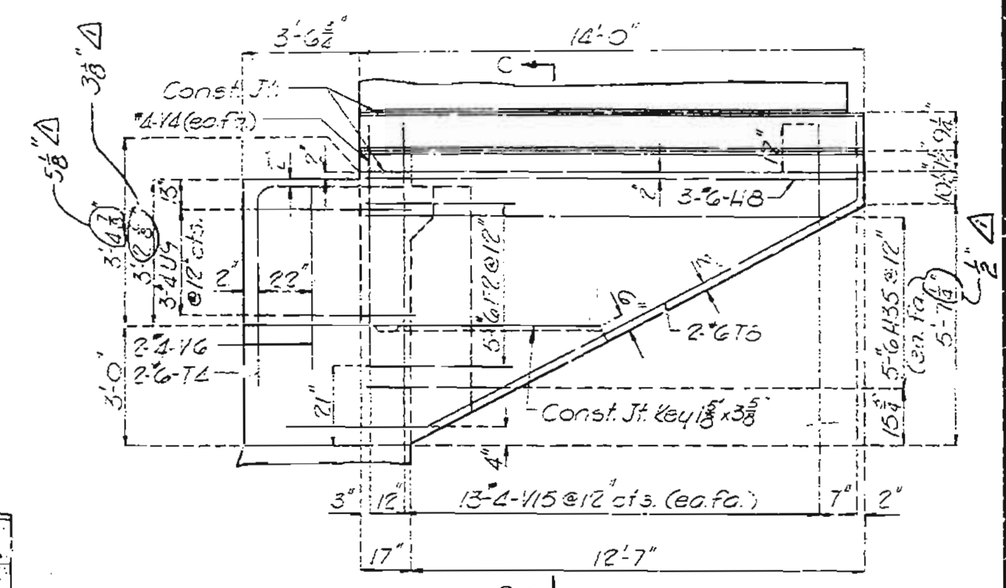
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19		



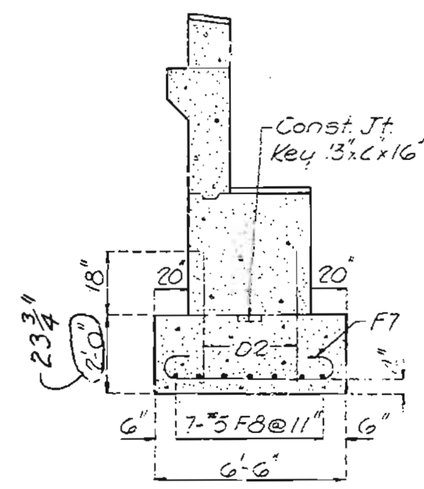
SECTION F-F



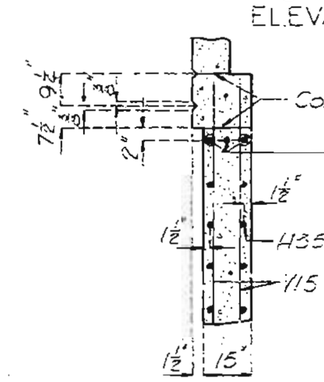
ELEVATION



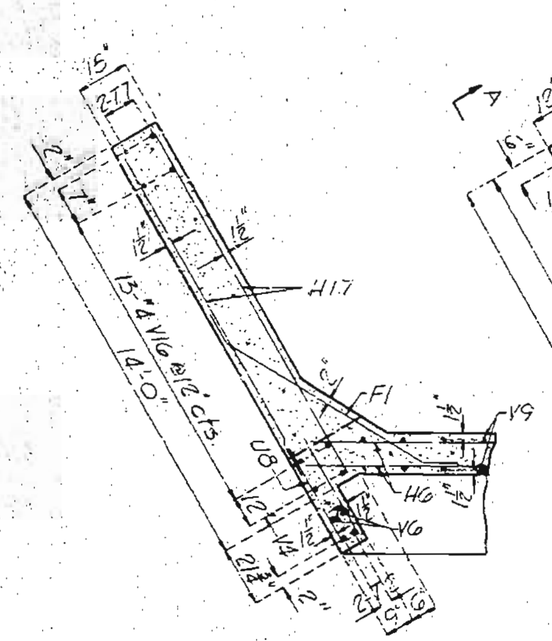
ELEVATION B-B



SECTION E-E



PART SECTION C-C PART SECTION D-D



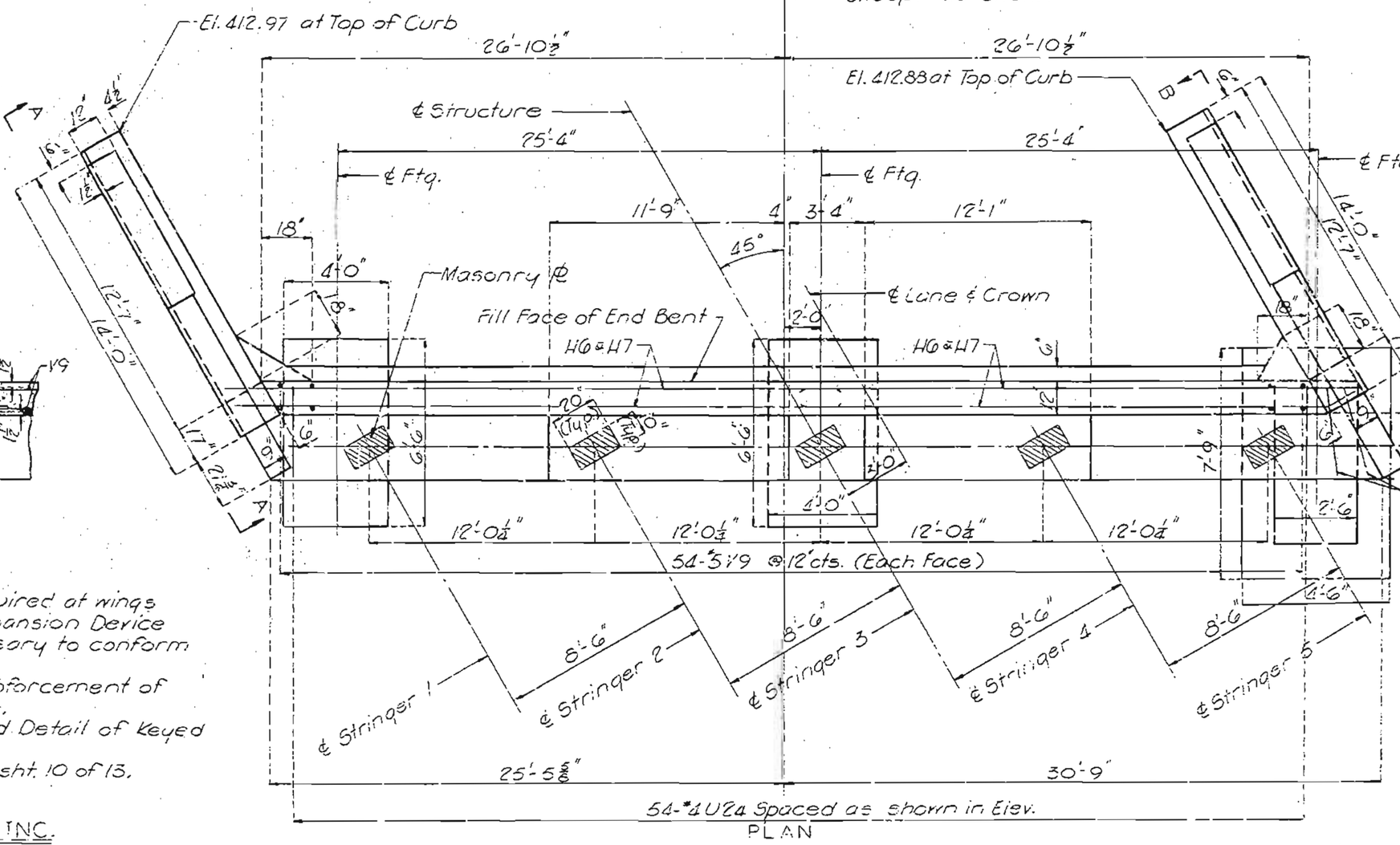
SECTION THRU WING

Note: Field bending shall be required at wings for "G H7 bars in bac..walls with Expansion Device and for F1 & F2 bars when necessary to conform to slope of wing.

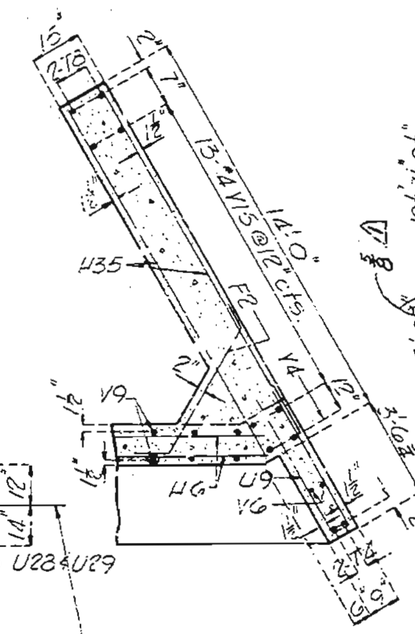
See handrail sheet for reinforcement of End Posts, Parapets and Curbs.

For additional notes and Detail of keyed Const. Joint see sht. 4 of 13.

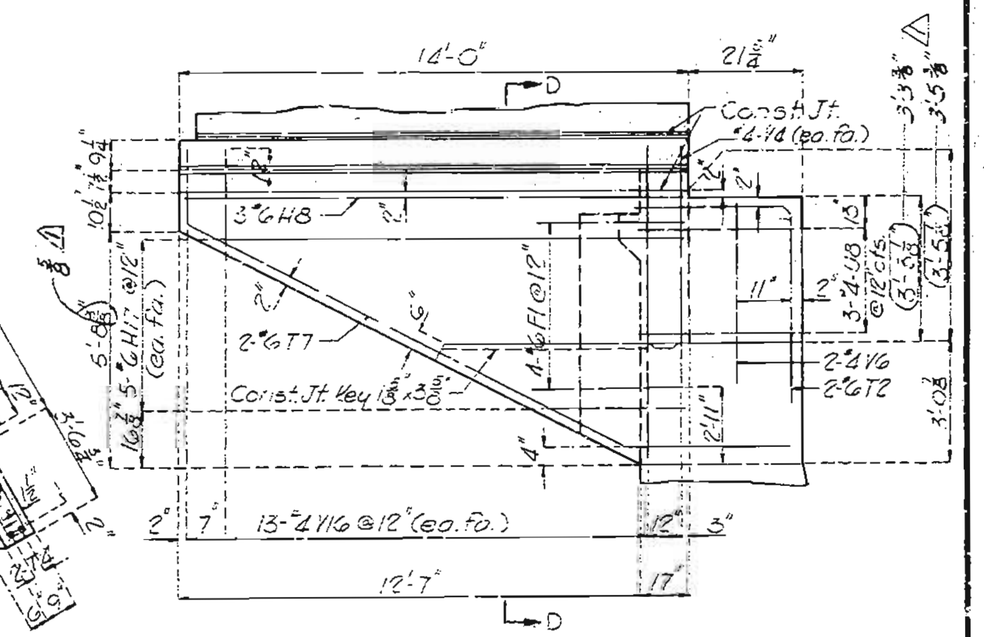
For Anchor Bolt Plan see sht. 10 of 13.



PLAN



SECTION THRU WING



ELEVATION A-A

BRIDGE

STATE ROAD

ABOUT

PROJECT NO. **STA.**

STE. GENEVIEVE **COUNTY**

BOPP & SALLER & ASSOCIATES INC.

DETAILED OCT. 1968 **BY** W.C.H.

CHECKED OCT. 1968 **BY** A.J.S.

△ - Rev. Mar. 12, 1970

DETAILS OF END BENT NO. 6 LEFT LANE

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 9 **of** 13 .

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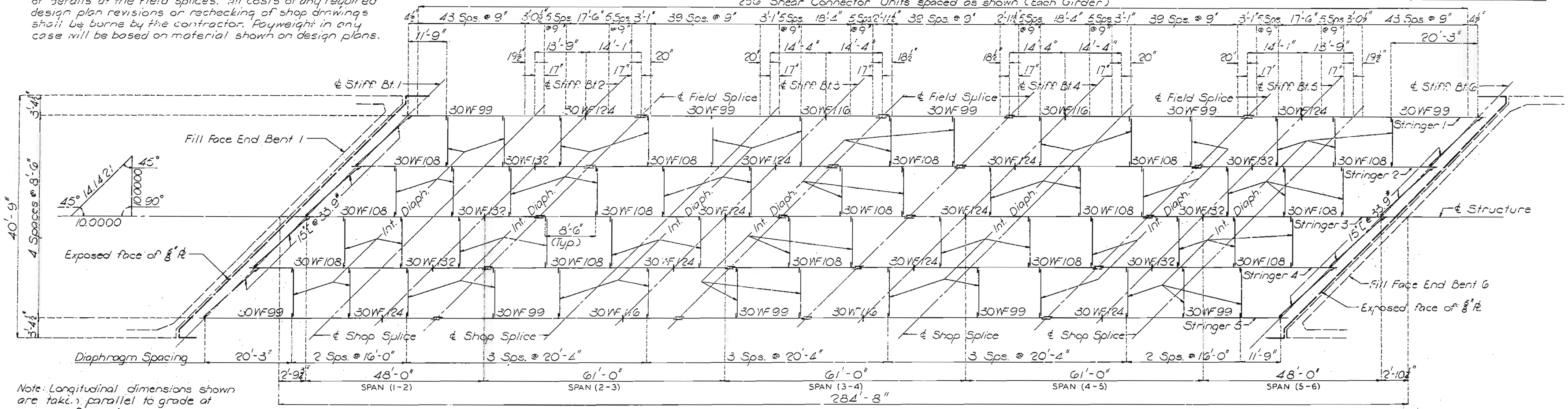
FOR INFORMATION ONLY

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19		

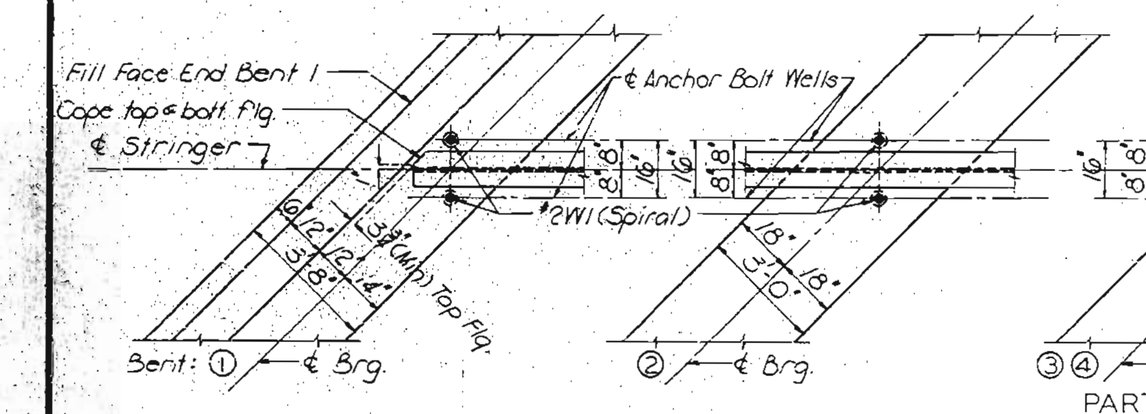
Note: By approval of the engineer, the contractor may omit any shop splice, if desired, by extending the heavier beam and providing approved modification of details at the field splices. All costs of any required design plan revisions or rechecking of shop drawings shall be borne by the contractor. Payweights in any case will be based on material shown on design plans.

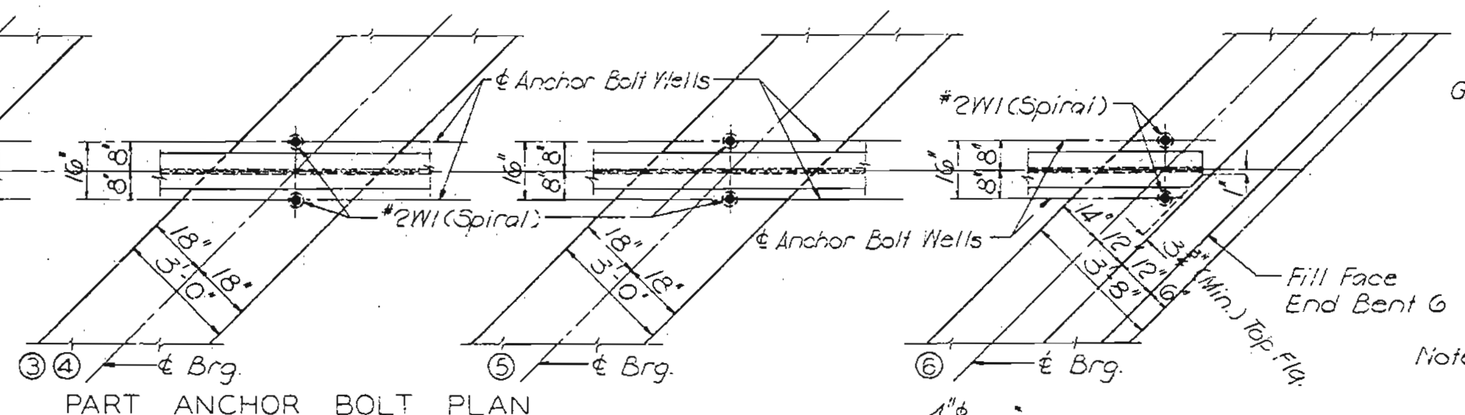
256 Shear Connector Units spaced as shown (Each Girder)



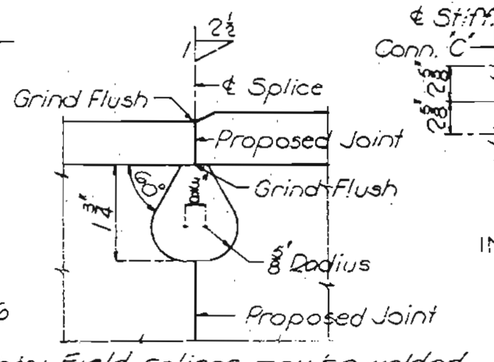
Note: Longitudinal dimensions shown are taken parallel to grade at crown of roadway.

PLAN OF STRUCTURAL STEEL



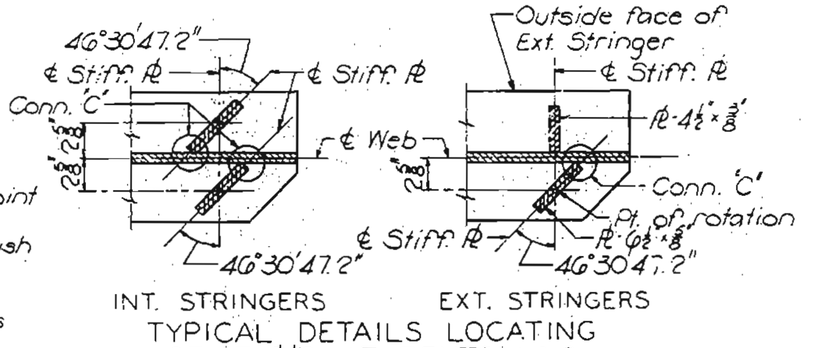


PART ANCHOR BOLT PLAN



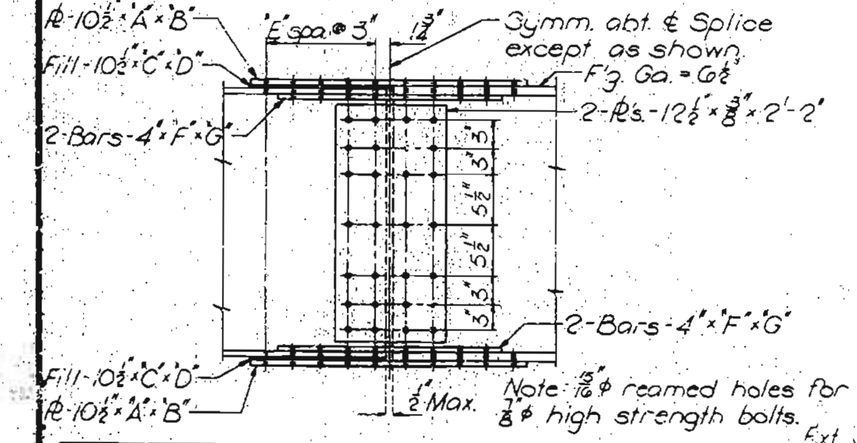
Note: Field splices may be welded or bolted.

WELDED FIELD SPLICE



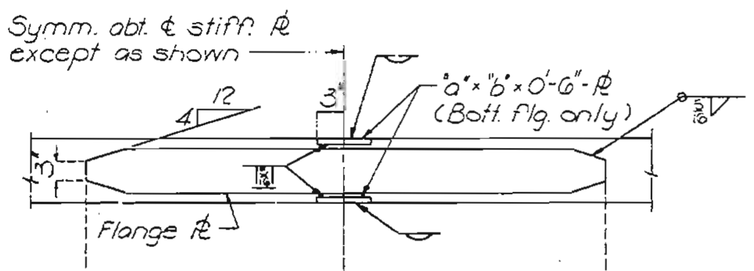
INT. STRINGERS EXT. STRINGERS

TYPICAL DETAILS LOCATING STIFF. PL'S. AT BENTS 1 & 6



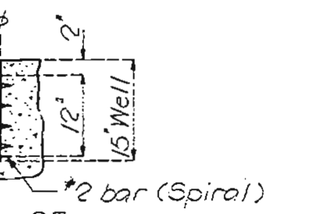
Note: 15/16" ϕ reamed holes for ⅞" ϕ high strength bolts.

Size of Beam	'A'	'B'	'C'	'D'	'E'	'F'	'G'
30" WF 99 to 116	¾"	2'-0½"	¾"	12"	3"	1"	18½"
30" WF 99 to 124	⅝"	2'-0½"	¼"	12"	3"	½"	18½"
30" WF 108 to 124	½"	2'-6½"	8 Ga.	15"	4	½"	18½"
30" WF 108 to 132	½"	2'-6½"	¼"	15"	4	½"	18½"

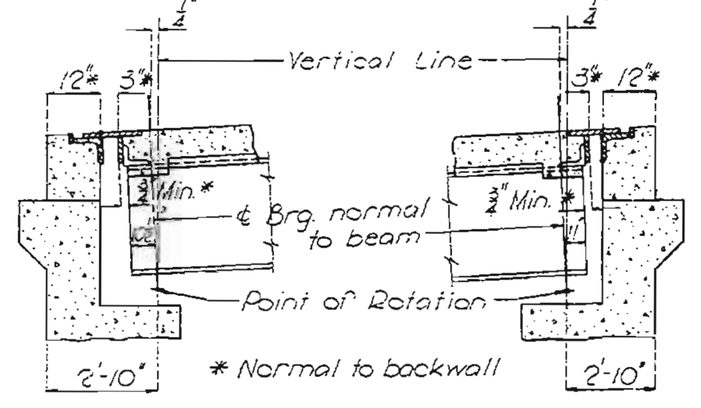


	'a'	'b'	
Ext. Stringers Bt. 2	4'-6" (48' Span)	4'-6" (61' Span)	8" x ½" x 9'-0"
Int. Stringers Bt. 2	4'-6" (48' Span)	4'-6" (61' Span)	7" x ½" x 9'-0"
Ext. Stringers Bt. 3 & 4	6'-0" (61' Span)	6'-0" (61' Span)	9" x ⅝" x 12'-0"
Int. Stringers Bt. 3 & 4	6'-0" (61' Span)	6'-0" (61' Span)	8" x ⅝" x 12'-0"
Ext. Stringers Bt. 5	4'-6" (61' Span)	4'-6" (48' Span)	8" x ½" x 9'-0"
Int. Stringers Bt. 5	4'-6" (61' Span)	4'-6" (48' Span)	7" x ½" x 9'-0"

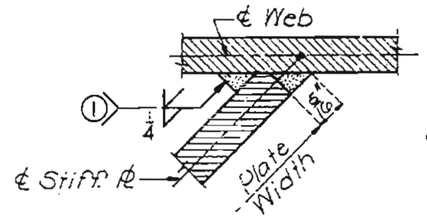
FLANGE PLATE DETAILS (Top & Bott. Flg.)



DETAIL OF ANCHOR BOLT WELLS

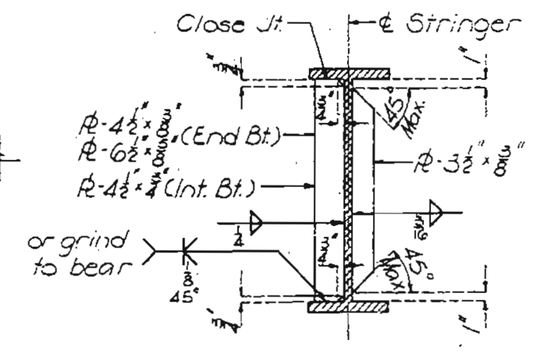


PART LONGITUDINAL SECTION



CONN. 'C'

Note: ① Groove weld penetration = ¼" Min.



BRG. STIFF. INT. DIAPH.

WELDING DETAILS

Note: For details of shear connectors see sheet 12 of 13.

BRIDGE

STATE ROAD

ABOUT

PROJECT NO. **STA.**

STE. GENEVIEVE **COUNTY**

BOPP & SALLER & ASSOCIATES, INC.

DETAILED OCT. 1968 **BY** M. J. S.

CHECKED OCT. 1968 **BY** A. J. S.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 10 **of** 13 .

A-2269

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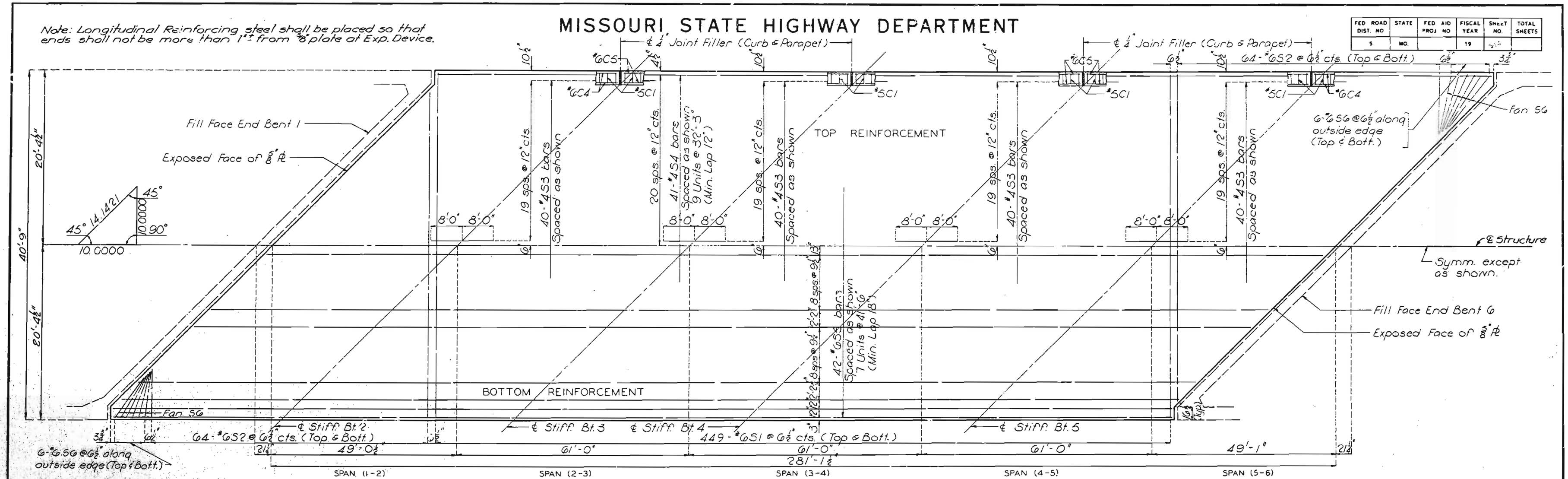
A2269R, Sht. 10

MISSOURI STATE HIGHWAY DEPARTMENT

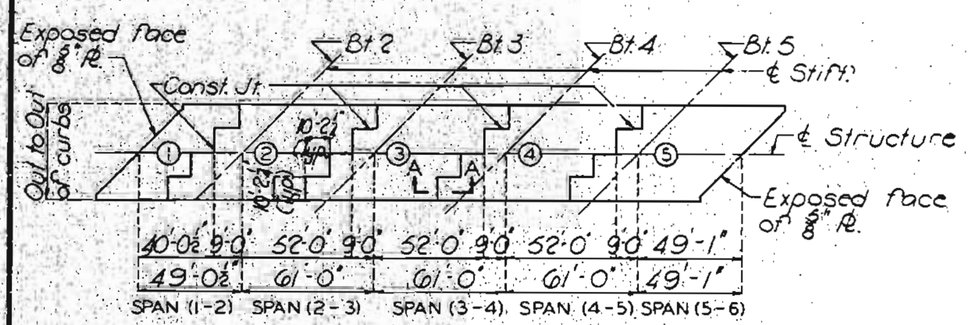
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19		

Note: Longitudinal Reinforcing steel shall be placed so that ends shall not be more than 1" from ℄ plate at Exp. Device.



PLAN OF SLAB SHOWING REINFORCEMENT

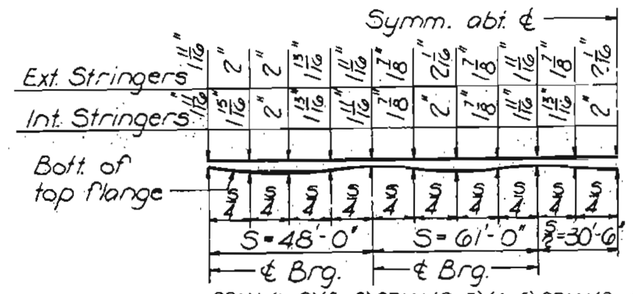
Note: Longitudinal dimensions shown are taken parallel to grade at crown of roadway.



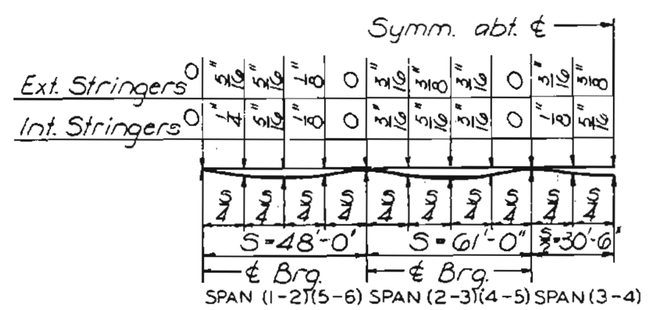
	Sequence of Pours				
	Direction				
Basic Sequence	1. E.D.	2. 1 to 3	3. 2 to 4	4. 3 to 5	5. 4 to End
Alternate 'A' Pours	1 + 2 End to 3		3. 2 to 4	4 to 5 3 to End	
Alternate 'B' Pours	1 + 2 + 3 End to 4			4 + 5 3 to End	
Alternate 'C' Pours	1 + 2 + 3 + 4 + 5 End to End				

Note: The contractor shall use a finishing machine and shall pour and satisfactorily finish the slab pours at a rate of not less than 29 cubic yards per hour unless he elects to use an approved retarder at his own expense to retard the set of the concrete to 2.5 hours in which case he may reduce his pouring and finishing rate to not less than 25 cubic yards per hour. The contractor shall observe the basic pouring sequence unless he can demonstrate to the engineer that he can pour and satisfactorily finish one of the longer alternate pours.

SLAB POURING SEQUENCE

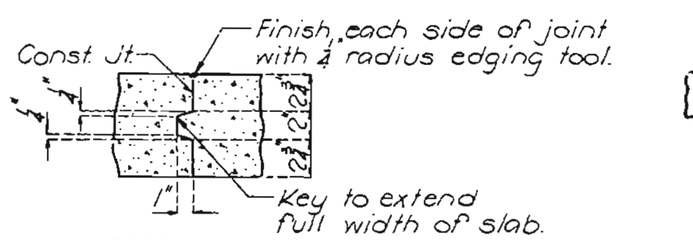


THEORETICAL SLAB HAUNCHING DIAGRAM

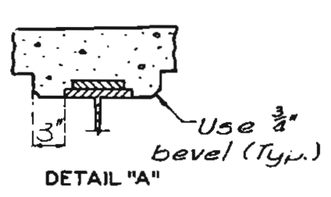


13.6% Structural Steel

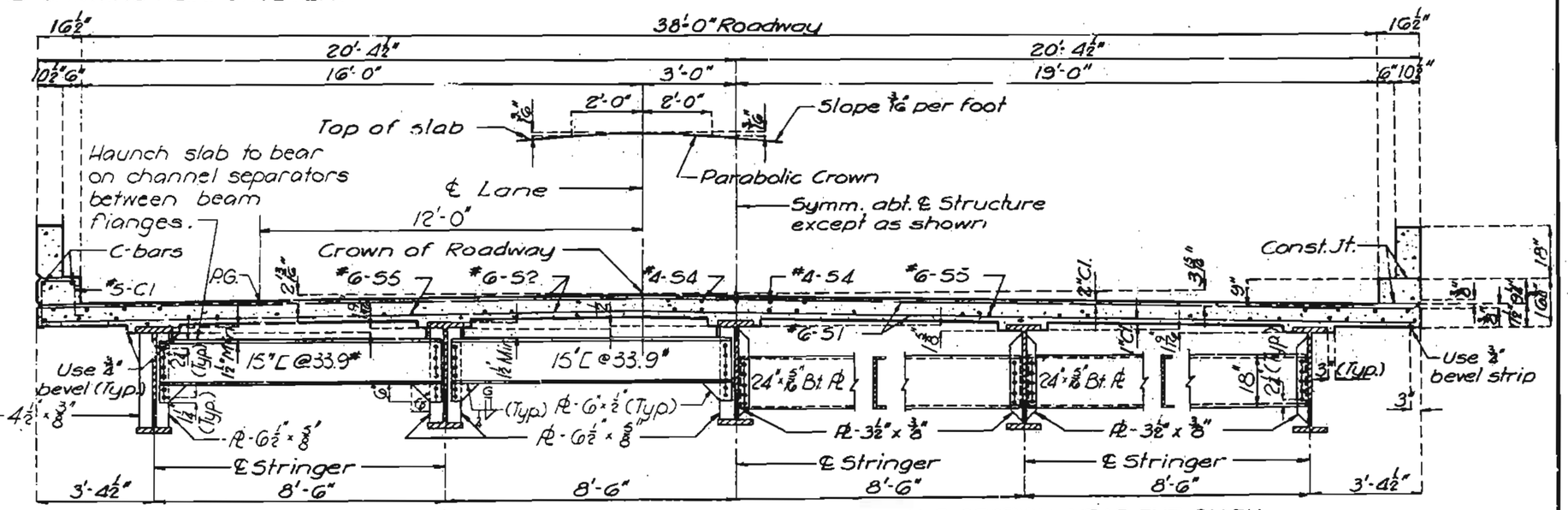
DEAD LOAD DEFLECTION



SECTION A-A



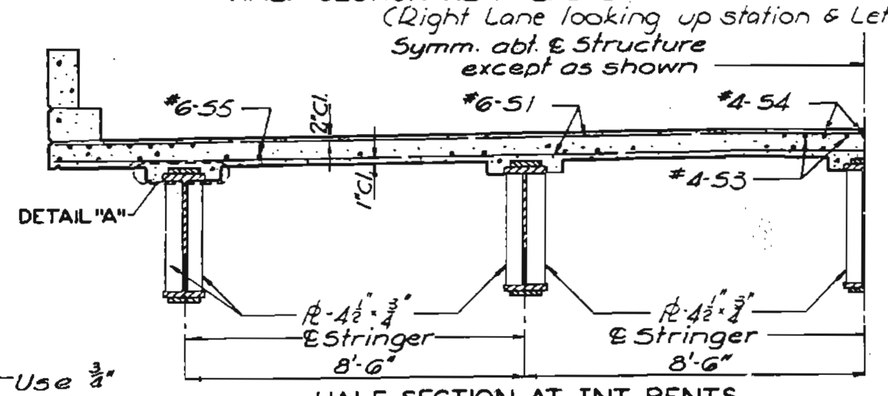
DETAIL "A"



HALF SECTION NEAR END DIAPH.

HALF SECTION NEAR INT. DIAPH.

(Right Lane looking up station & Left Lane looking down station)



HALF SECTION AT INT. BENTS

Note: For details and reinforcement of curb and parapet not shown see sheet No. 13 of 13.

BRIDGE

STATE ROAD

ABOUT

PROJECT NO. **STA.**

STE. GENEVIEVE **COUNTY**

A-2269

BOPP & SALLER & ASSOCIATES, INC.

DETAILED OCT. 1968 BY M.J.S.

CHECKED OCT. 1968 BY A.J.S.

STD-4138.5RL | REVISED JUNE 1968 | DEC. 1964

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 11 of 13.

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FOR INFORMATION ONLY

A2269R, Sht. 11

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19		

NOTES: TYPE "D" BEARINGS

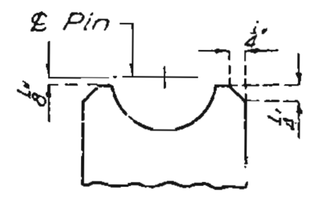
Lead plates under bearings shall be approximately $\frac{1}{8}$" thickness and weigh 8#/sq. ft. Cost of lead plates shall be included in price bid for other items.

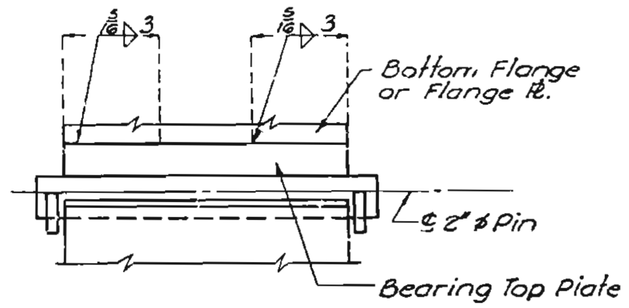
"Estimated weight" does not include weight of anchor bolts.

Rockers and pedestals shall be machined after welding.

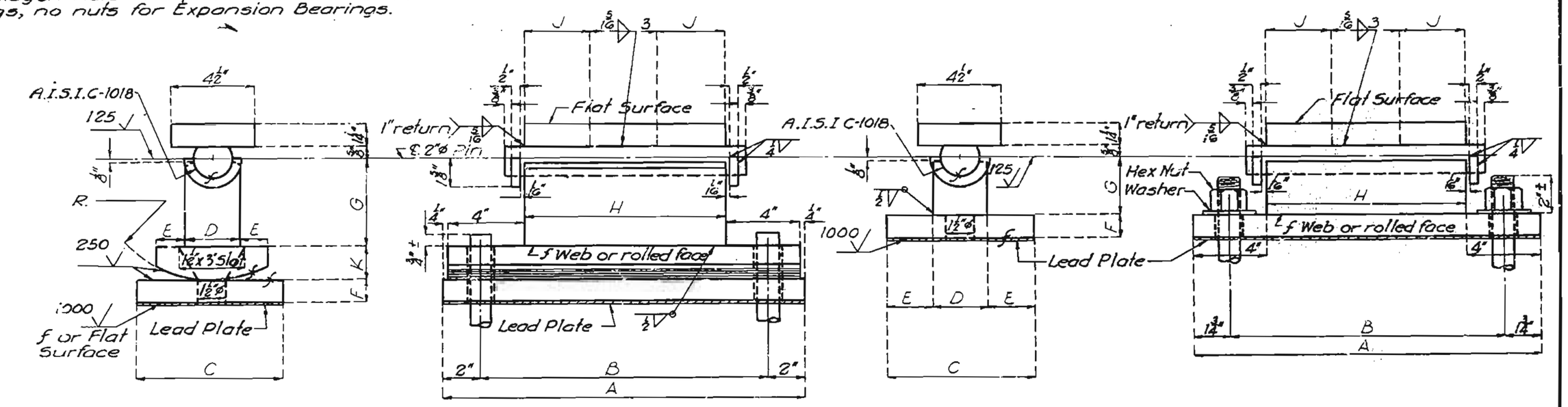
Where flat surface is indicated, tolerance shall be .003 in/in in any direction.

Anchor Bolts for Type "D" Bearings shall be $1\frac{1}{4}$"ø swedged bolts and shall extend 12" into concrete, with hexagon nuts and plain washers for Fixed Bearings, no nuts for Expansion Bearings.





WELDING DETAILS



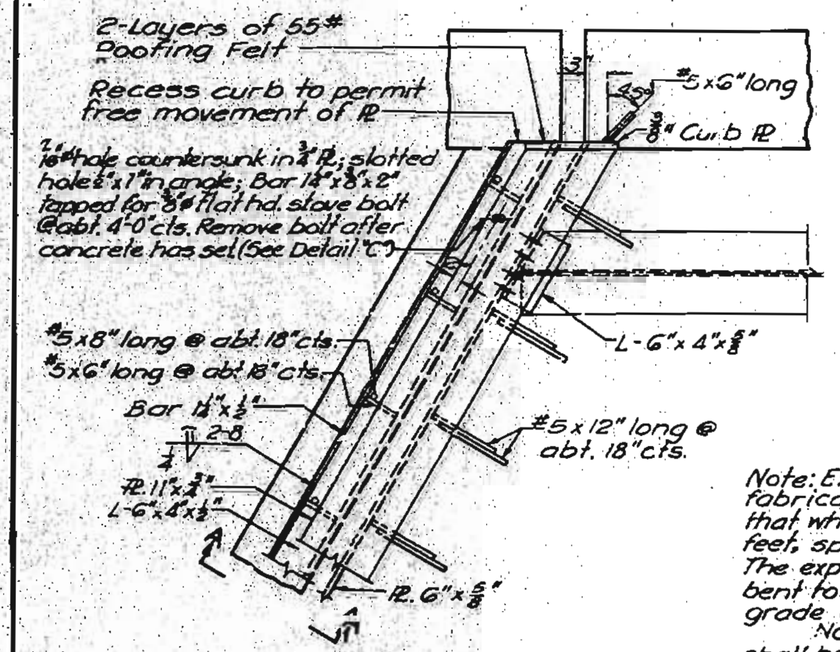
EXPANSION

Required: 5 @ Bents 1 & 6 = 2,120#
5 @ Bents 2, 4 & 5 = 4,110#

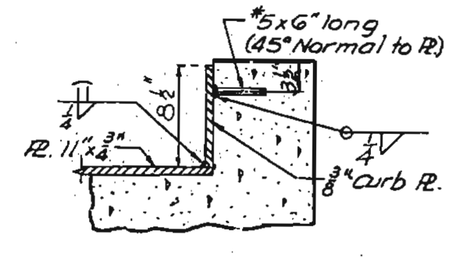
FIXED

Required: 5 @ Bent 3 = 630#

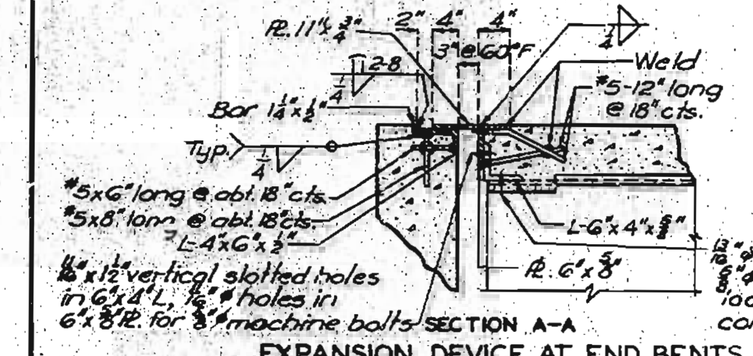
TYPE "D" BEARINGS
(Estimated Weight 6860#)



PART PLAN



SECTION THRU CURB

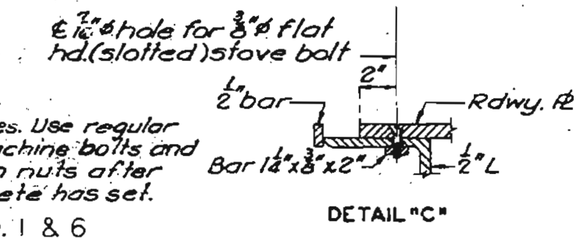


SECTION A-A

Note: Expansion Device shall be fabricated in one section except that when the length is over 50 feet, splicing is permissible. The expansion device shall be bent to conform to crown and grade of roadway.

No. 5 bars for expansion device shall be structural grade. Approved stud welded anchors may be used in lieu of #5 bars shown.

Use 2 Layers of 55# Roofing Felt between the sliding contact surface of curb plate and concrete curb.



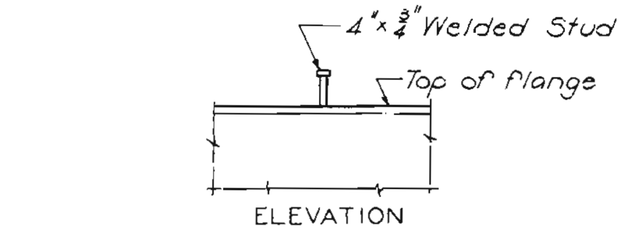
DETAIL "C"

EXPANSION DEVICE AT END BENTS NO. 1 & 6

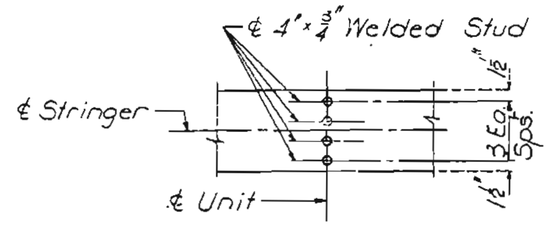
BOPP & SALLER & ASSOCIATES, INC.

DETAILED OCT. 1968 BY M.J.S.

CHECKED OCT. 1968 BY A.J.S.



ELEVATION



PLAN OF STUD CONN.

DETAILS OF SHEAR CONNECTORS

℄Brg. / Dim.	A	B	C	D	E	F	G	H	J	K	Q
Bts. 1 & 6	20"	16"	10"	3"	1⅛"	1⅛"	5¾"	11⅛"	4¼"	1⅜"	7½"
Bts. 2, 4 & 5	20"	16"	12"	3"	2"	2"	5½"	11⅛"	4¼"	2"	7½"
Bt. 3	19½"	16"	10"	3"	3½"	1¼"	3⅝"	11⅛"	4¼"	-	-

BRIDGE

STATE ROAD

ABOUT

PROJECT NO. **STA.**

STE. GENEVIEVE **COUNTY**

A-2269

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 12 of 13.

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FOR INFORMATION ONLY

A2269R, Sht. 12

MISSOURI STATE HIGHWAY DEPARTMENT

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
5	MO		19	13	13

GENERAL HANDRAIL NOTES:

All handrail posts shall be set normal to grade.

Aluminum tube handrail shall be bent to conform to vertical and horizontal alignment of parapet.

Aluminum washer shims between top of parapet and post base may be used for adjusting handrail alignment. Maximum thickness of shims to be 1/8". Where more fitting of post is required for proper alignment, concrete bearing areas shall be ground down.

All parts of handrail, except anchor bolts, nuts, washers, and set screws are to be of aluminum material.

The contract unit price per linear foot of "Bridge Rail" shall include furnishing and erecting the handrail complete with anchor bolts, shims and insulating compound.

All fillets 1/4" except as noted.

All drafts 3° except as noted.

Pipe rail to be fabricated in a minimum of 2 panel lengths.

Omit set screw in side of rail posts adjacent to filled joints in curb and parapet at rail expansion points. Omit set screw in each side of rail post on end bents except where a gap is shown in rail over an expansion device.

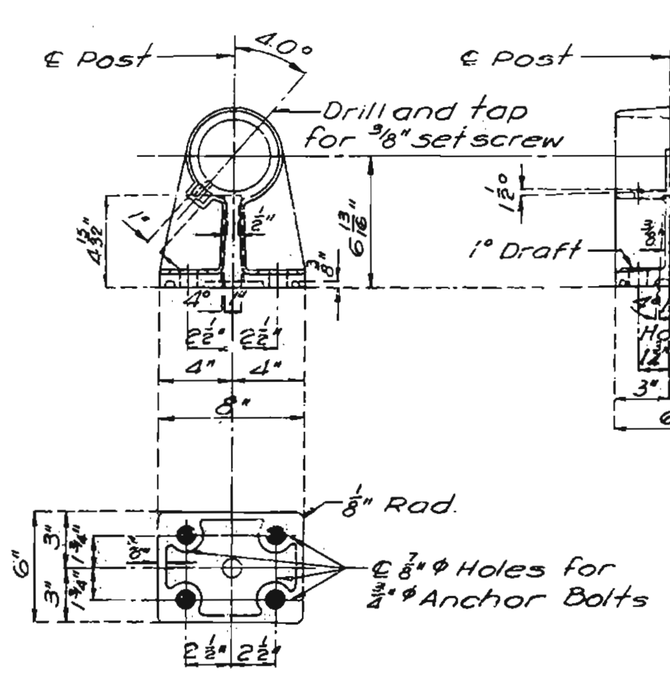
Top of curbs and parapets to be built parallel to grade with curb and parapet joints (except at end bents) normal to grade.

Concrete end posts to be vertical.

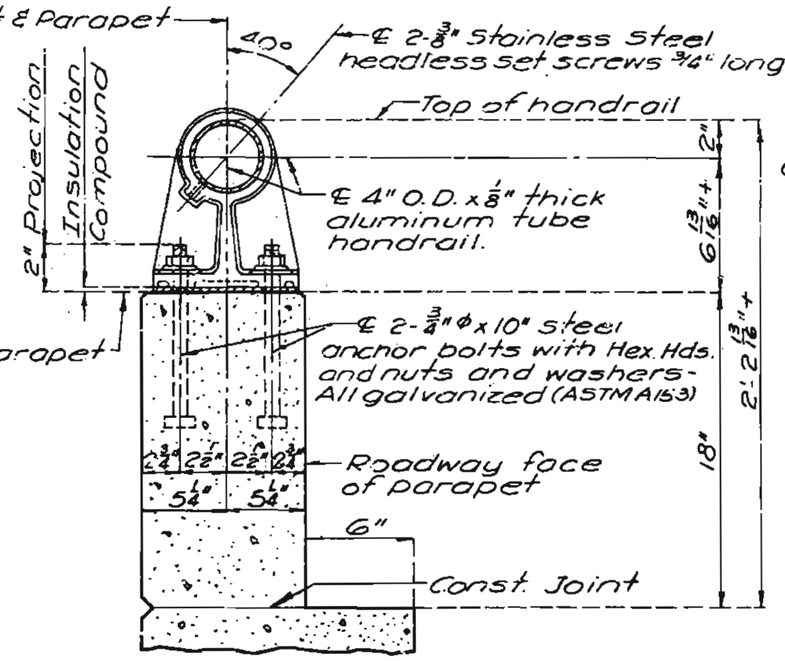
All exposed edges of end posts shall have 1/2" bevel. All exposed edges of curbs and parapets shall have 1/2" radius or 3/8" bevel unless otherwise noted.

If the contractor desires, he may use drive fit cast aluminum end caps in lieu of welded aluminum closure plates.

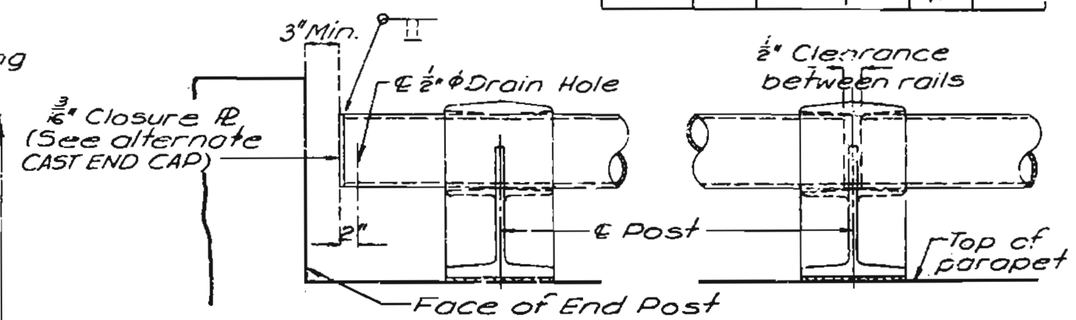
Integrally cast test coupons and a coat of clear lacquer specified in Std. Spec. 56.2.4 and 56.3.5 respectively will not be required for these rail posts.



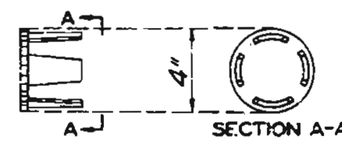
POST DETAILS



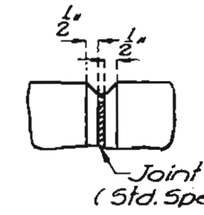
SECTION THRU HANDRAIL



TYPICAL HANDRAIL DETAILS

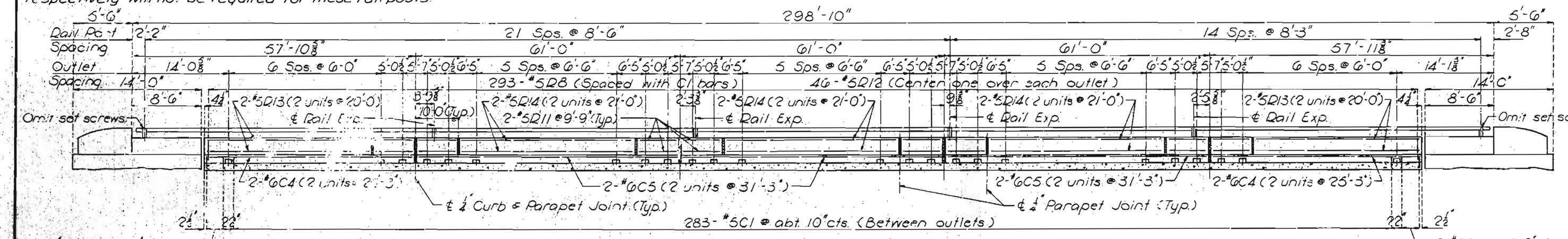


CAST END CAP
(Drive Fit Type)



FILLED JOINT DETAILS

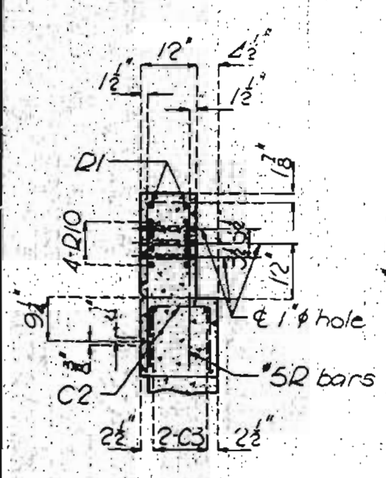
ONE TUBE ALUMINUM RAILING



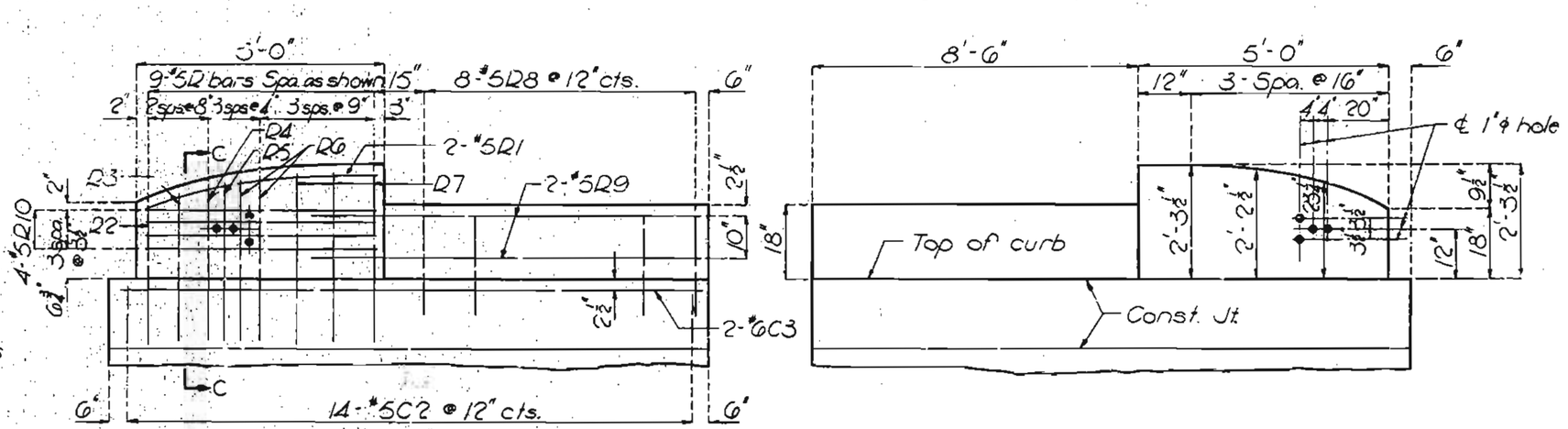
Note: Longitudinal dimensions shown are taken along top of parapet parallel to grade.

SECTION NEAR LEFT CURB AND PARAPET
Note: Right curb & parapet similar

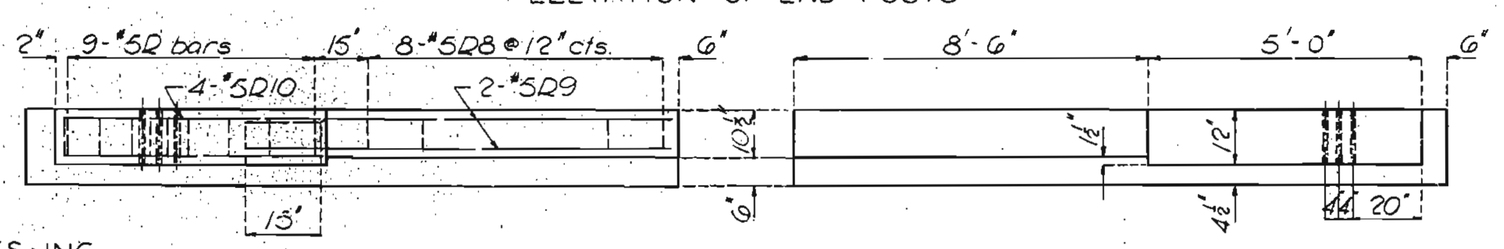
Outlet Spa	N
5'-0 1/2"	5
5'-0"	6
6'-5"	7
6'-6"	7



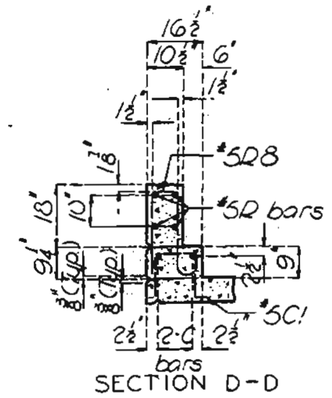
SECTION C-C

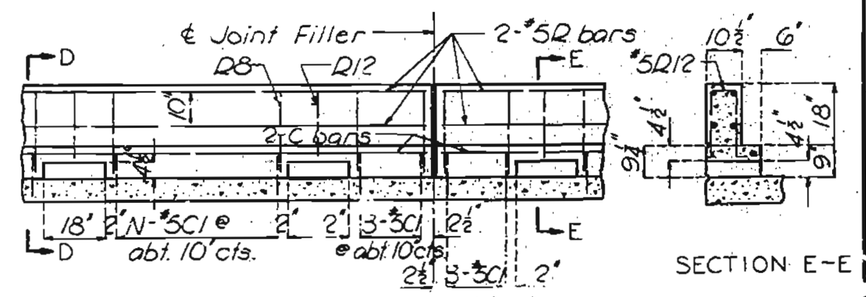


ELEVATION OF END POSTS



PLAN OF END POSTS





ELEVATION OF CURB & PARAPET

Notes: For horizontal curb and parapet bars use a minimum lap of 15" for #5 and 18" for #6.
When curb outlets are omitted space #5C1 bars at abt. 12" cts.

BRIDGE

STATE ROAD

ABOUT

PROJECT NO. **STA.**

STE. GENEVIEVE **COUNTY**

A-2269

BOPP & SALLER & ASSOCIATES, INC.

DETAILED OCT. 1968 BY M.J.S.

CHECKED OCT. 1968 BY A.J.S.

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 13 of 13.

STD. 15.2	REVISED	FEB. 1968
MAR. 1964		

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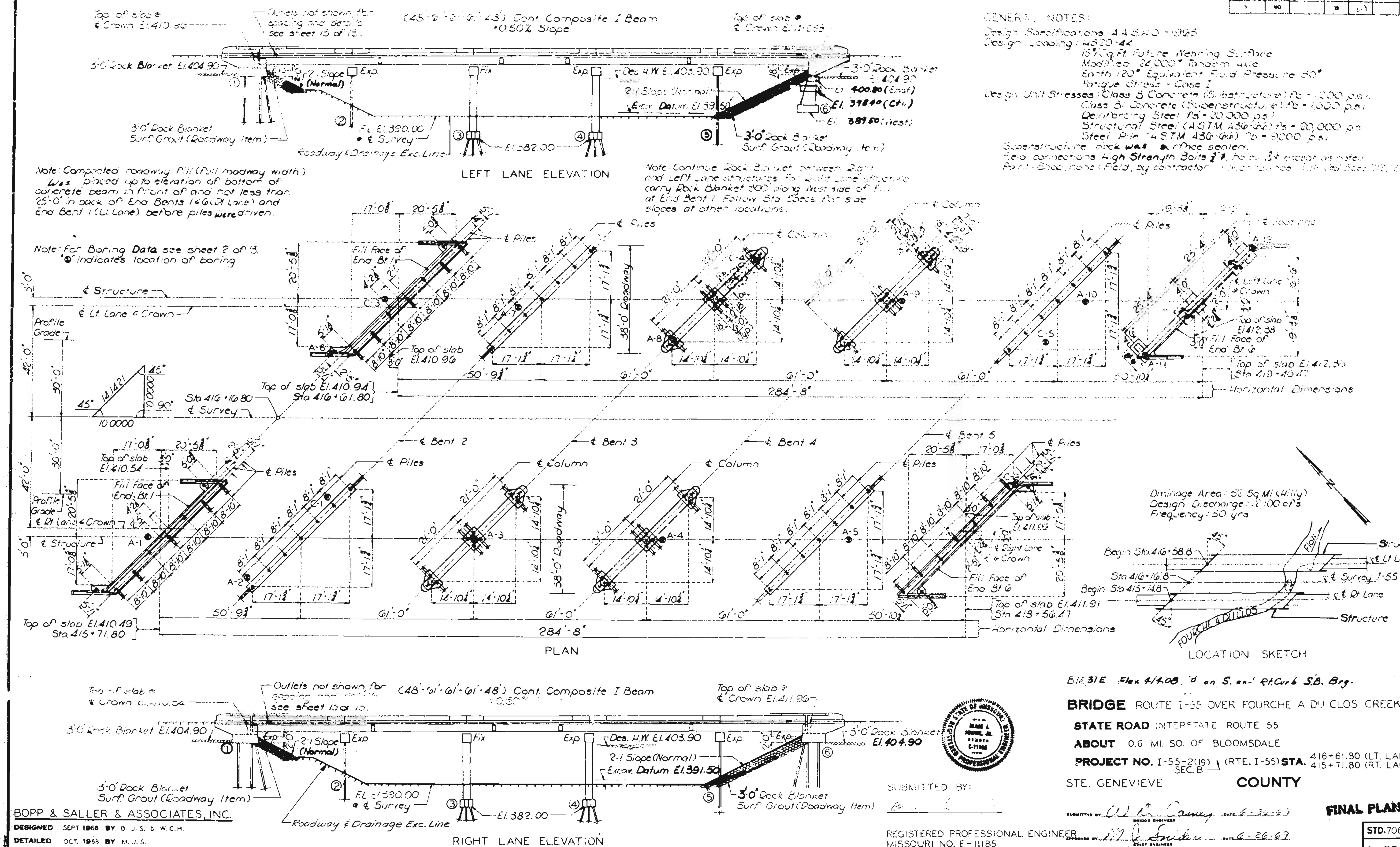
FOR INFORMATION ONLY

A2269R, Sht. 13

FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	MO.		19		



GENERAL NOTES:

Design Specifications: A.A.S.H.O. - 1965
Design Loading: HS20-44
15#/Sq. Ft. Future Wearing Surface
Modified 24,000# Tandem Axle
Earth 120# Equivalent Fluid Pressure 30#
Fatigue Stress - Case I
Design Unit Stresses: Class B Concrete (Substructure) f'c = 1,200 p.s.i.
Class B1 Concrete (Superstructure) f'c = 1,500 p.s.i.
Reinforcing Steel fs = 20,000 p.s.i.
Structural Steel (A.S.T.M. A36-66) fs = 20,000 p.s.i.
Steel Pile (A.S.T.M. A36-66) fs = 9,000 p.s.i.

Superstructure deck was surface sealed.

Field connections High Strength Bolts ⅞"ɸ, holes 15/16" except as noted.

Paint: Shop, none; Field, by contractor in accordance with Std. Spec. 712.

B.M. 31E Elev. 414.08, □ on S. end Rt. Curb S.B. Brg.

BRIDGE ROUTE I-55 OVER FOURCHE A DU CLOS CREEK

STATE ROAD INTERSTATE ROUTE 55

ABOUT 0.6 MI. SO. OF BLOOMSDALE

PROJECT NO. I-55-2(19) SEC. B (RTE. I-55) **STA.** 416+61.80 (LT. LANE) 415+71.80 (RT. LANE)

STE. GENEVIEVE **COUNTY**

SUBMITTED BY: [signature] BRIDGE ENGINEER DATE 6-26-67

APPROVED BY: [signature] CHIEF ENGINEER DATE 6-26-67

SUBMITTED BY:

REGISTERED PROFESSIONAL ENGINEER
MISSOURI NO. E-11185
Sheet No. 1A of 89.

BOPP & SALLER & ASSOCIATES, INC.

DESIGNED	SEPT. 1966	BY B.J.S. & W.C.H.
DETAILED	OCT. 1966	BY M.J.S.
CHECKED	OCT. 1966	BY A.J.S.

Note: This drawing is not to scale. Follow dimensions.

FINAL PLANS

STD. 706.30

A-2269

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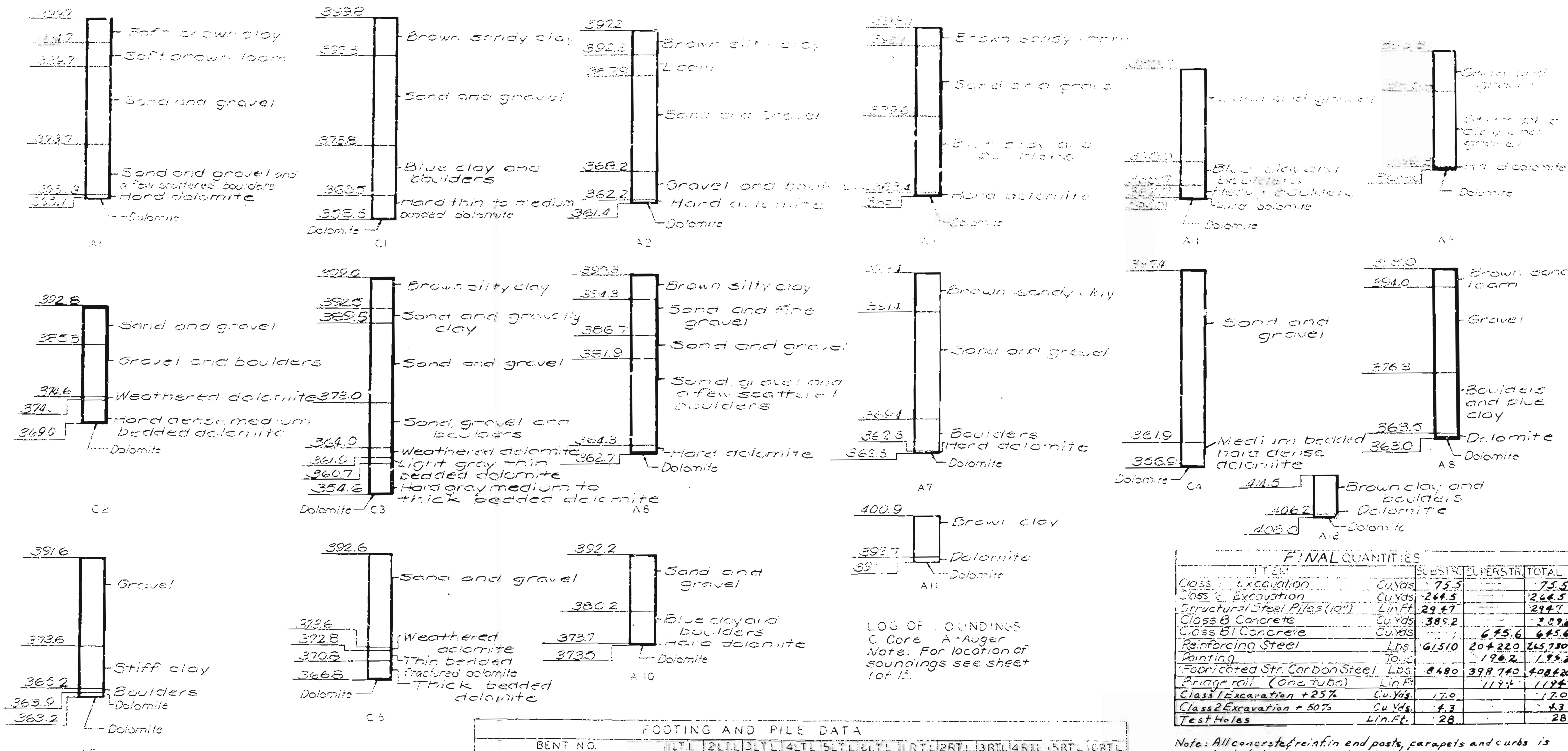
FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT



LOG OF SOUNDINGS
C Core A-Auger
Note: For location of soundings see sheet 1 of 13.

FINAL QUANTITIES				
ITEM		SUBSTR.	SUPERSTR.	TOTAL
Class 1 Excavation	Cu.Yds	75.5		75.5
Class 2 Excavation	Cu.Yds	264.5		264.5
Structural Steel Piles (10")	Lin.Ft.	2947		2947
Class B Concrete	Cu.Yds	389.2		389.2
Class B1 Concrete	Cu.Yds		645.6	645.6
Reinforcing Steel	Lbs	61510	204220	265,730
Painting	Tons		196.2	196.2
Fabricated Str. Carbon Steel	Lbs.	8480	398740	408420
Bridge rail (One tube)	Lin.Ft.		1194	1194
Class 1 Excavation + 25%	Cu.Yds.	17.0		17.0
Class 2 Excavation + 50%	Cu.Yds.	4.3		4.3
Test Holes	Lin.Ft.	28		28

Note: All concrete & reinf. in end posts, parapets and curbs is included with superstructure quantities.
No payment for excavation will be allowed at End Bents 1 & 6 Rt. Lane and End bent 1 Lt. Lane.
Payment for painting exposed surface of pile and bracing is considered fully covered under item "Structural Steel Pile".
Payweight for Fabricated Structural Steel based on welded field splices regardless of type used.

FOOTING AND PILE DATA													
	BENT NO.	1LT.L.	2LT.L.	3LT.L.	4LT.L.	5LT.L.	6LT.L.	1RT.L.	2RT.L.	3RT.L.	4RT.L.	5RT.L.	6RT.L.
BEARING PILE	Pile Type and Size	10BP42	10BP42	10BP42	10BP42	10BP42		10BP42	10BP42	10BP42	10BP42	10BP42	10BP42
	Number	9	7	10	10	7		9	7	10	10	7	9
	Approximate Length Ft.	41	41	19	19	32		41	41	19	19	37	33
	Design Bearing Tons	21	43	49	49	45		21	45	49	49	45	21
	Hammer Energy req'd Ft.Lb.	7400	10,100	11,500	11,500	10,100		7400	10,100	11,500	11,500	10,100	7400
SPREAD FOOTING	Foundation Material						Rock						
	Design Bearing Tons/SqFt.						5.9						

Note: Minimum energy requirement of hammer based on plan length and design bearing value of piles. Increase by the factor (W+w)/2W when the weight of the ram (W) is less than the weight of the pile (w). All pile were driven to refusal on solid rock.

STE. GENEVIEVE COUNTY

FINAL PLANS

A-2269

DETAILED OCT. 1966 BY
CHECKED OCT. 1966 BY

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 2A of 9.

FINAL PLANS

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MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIV. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO		19		

COMPLETE BILL OF REINFORCING STEEL

NO.	SIZE	LENGTH	MARK	LOCATION
End Bents 1				
6	#6	9'-5"	F1	Wing
6	#6	5'-5"	F2	
24	#8	30'-0"	H1	Beam
8	#6	28'-6"	H2	"
16	#4	28'-6"	H6	Backwall
8	#6	29'-0"	H7	"
8	#6	15'-9"	H8	Wing
1	#6	22'-3"	H9	"
4	#6	22'-0"	H50	"
4	#6	11'-0"	T1	Wing
4	#6	7'-9"	T2	"
4	#6	10'-6"	T3	"
4	#6	9'-6"	T4	"
81	#4	12'-0"	U1	Beam
14	#4	4'-0"	U5	"
10	#7	16'-9"	U6	"
10	#7	15'-0"	U7	"
6	#4	6'-0"	U8	Wing
6	#4	9'-6"	U9	"
6	#6	2'-9"	V2	Beam
28	#4	5'-6"	V4	Wing
14	#4	6'-0"	V5	"
8	#4	4'-5"	V6	"
28	#4	5'-6"	V7	"
12	#4	6'-5"	V8	"
20	#2	19'-9"	W1	A.B. Wells
Variable Bent 1 (Right Lane)				
4	#8	28'-9"	H3	Beam
4	#8	15'-0"	H4	"
4	#8	18'-6"	H5	"
15	#4	13'-5"	U2	Beam
14	#4	15'-3"	U3	"
1	#4	11'-3"	U4	"
108	#5	5'-6"	V1	Backwall
2	#6	3'-0"	V3	Beam
Variable Bent 1 (Left Lane)				
1	#4	11'-0"	U10	Beam
108	#5	5'-6"	V9	Backwall
Intermediate Bents 2 & 5				
32	#10	28'-3"	H12	Beam
16	#6	26'-6"	H13	"
126	#5	11'-0"	U11	Beam
56	#4	3'-9"	U13	"
40	#2	19'-9"	W1	A.B. Wells
Varia				
Variable Bent 2 & 5 (Right Lane)				
8	#10	16'-0"	H14	Beam
8	#10	27'-9"	H15	"
8	#10	15'-0"	H16	"
34	#5	11'-9"	U14	Beam
28	#5	11'-6"	U15	"
Variable Bent 2 & 5 (Left Lane)				
16	#10	19'-3"	H10	Beam
8	#10	20'-3"	H11	"
44	#5	11'-6"	U12	Beam

NO.	SIZE	LENGTH	MARK	LOCATION
Intermediate Bents 3 & 4				
108	#8	4'-0"	D1	Footing
48	#6	9'-3"	F4	Footing
16	#6	9'-0"	F5	"
16	#6	10'-0"	F6	"
32	#7	9'-3"	H18	Beam
16	#11	15'-0"	H19	"
48	#10	14'-5"	H20	"
8	#11	15'-6"	H21	"
24	#10	53'-3"	H22	"
16	#6	25'-6"	H23	"
24	#11	49'-2"	H24	"
8	#10	42'-0"	H25	"
240	#3	8'-0"	S1	Column
28	#4	5'-9"	U16	Beam
156	#5	12'-0"	U19	"
24	#5	11'-6"	U20	"
56	#5	9'-6"	U21	"
40	#2	19'-9"	W1	A.B. Wells
Variable Bent 3 & 4 (Right Lane)				
28	#5	10'-0"	U22	Beam
12	#5	12'-0"	U23	"
34	#8	21'-5"	V12	Column
Variable Bent 3 & 4 (Left Lane)				
28	#5	9'-9"	U17	Beam
12	#5	11'-9"	U18	"
54	#8	21'-9"	V11	Column
End Bent 6 (Right Lane)				
3	#6	9'-3"	F1	Wing
3	#6	5'-5"	F2	"
8	#8	30'-0"	H1	Beam
4	#6	28'-6"	H2	"
4	#8	15'-0"	H4	"
8	#4	28'-6"	H6	Backwall
4	#6	29'-0"	H7	"
4	#6	15'-9"	H8	Wing
2	#6	22'-6"	H26	"
2	#6	22'-3"	H27	"
4	#8	16'-6"	H28	Beam
4	#8	30'-3"	H29	"
2	#6	7'-9"	T2	Wing
2	#6	9'-6"	T4	"
2	#6	10'-9"	T5	"
2	#6	11'-5"	T6	"
26	#4	12'-9"	U1	Beam
15	#4	13'-5"	U2	"
[illegible]	#4	13'-3"	U3	"
[illegible]	#4	4'-0"	U5	"
5	#7	16'-9"	U6	"
5	#7	15'-0"	U7	"
3	#4	6'-0"	U8	Wing
3	#4	9'-6"	U9	"
1	#4	10'-9"	U27	Beam
108	#5	5'-6"	V1	Backwall
2	#6	2'-9"	V2	Beam
2	#6	3'-0"	V3	"
14	#4	5'-6"	V4	Wing
4	#4	4'-3"	V6	"

NO.	SIZE	LENGTH	MARK	LOCATION
End Bent 6 (Right Lane) (Cont.)				
14	#4	5'-6"	V7	Wing
7	#4	9'-5"	V15	"
7	#4	6'-5"	V14	"
10	#2	19'-9"	W1	A.B. Wells
End Bent 6 (Left Lane)				
30	#6	3'-0"	D2	Footing
4	#6	9'-3"	F1	Wing
3	#6	5'-5"	F2	
9	#5	4'-5"	F3	Footing
6	#5	8'-5"	F7	"
4	#5	3'-9"	F8	"
5	#5	9'-6"	F9	"
5	**#5**	**2'-0"**	**F9**	**Spl. Footing**
4	#6	28'-6"	H2	Beam
8	#4	28'-6"	H6	Backwall
4	#6	29'-0"	H7	"
6	#6	15'-9"	H8	Wing
5	#6	17'-0"	H17	"
12	#10	22'-5"	H51	Beam
12	#10	15'-0"	H52	"
12	#5	29'-6"	H53	"
12	#10	29'-6"	H54	"
5	#6	16'-9"	H55	Wing
10	**#6**	**4'-0"**	**V10**	**Spl. Column**
2	#6	7'-9"	T2	Wing
2	#6	9'-6"	T4	"
2	#6	17'-0"	T7	"
2	#6	17'-0"	T8	"
4	**#4**	**14'-6"**	**V17**	**Column***
3	#4	6'-0"	U8	Wing
3	#4	9'-6"	U9	"
54	#4	12'-0	U24	Beam
15	#4	4'-0"	U25	"
11	#5	16'-0"	U26	Column
1	#4	12'-5"	U28	Beam
1	#4	12'-9"	U29	"
3	**#3**	**16'-6"**	**U26**	**Column**
4	#4	5'-6"	V4	Wing
4	#4	4'-3"	V6	"
108	#5	5'-6"	V9	Backwall
10	#6	13'-5"	V10	Column
15	#4	9'-6"	V15	Wing
15	#4	9'-6"	V16	"
10	#2	19'-9"	W1	A.B. Wells
Superstructure				
1172	#5	5'-6"	C1	Curb
112	#5	5'-5"	C2	"
16	#6	13'-9"	C3	"
32	#6	25'-3"	C4	"
48	#6	31'-3"	C5	"
16	#5	4'-9"	R1	End Post
8	#5	6'-0"	R2	"
8	#5	6'-6"	R3	"
8	#5	6'-9"	R4	"
8	#5	7'-0"	R5	"
16	#5	7'-3"	R6	"
24	#5	7'-6"	R7	"
1236	#5	5'-5"	R8	Parapet
32	#5	9'-9"	R9	"
32	#5	10'-0"	R10	End Post
128	#5	9'-9"	R11	Parapet
184	#5	4'-3"	R12	"
64	#5	20'-0"	R13	"
96	#5	21'-0"	R14	"

NO.	SIZE	LENGTH	MARK	LOCATION
Superstructure (Cont.)				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

BENDING SKETCHES & CUTTING DIAGRAMS

*BEND AS SHOWN

CUTTING SCHEDULE

REMARKS	a	b	c	d
2H9 cut 4	2'-0	9'-8[illegible]	[illegible]	22'-3
5H17 cut 5	2'-3[illegible]	[illegible]	[illegible]	7'-0
2H26 cut 2	2'-6	9'-3[illegible]	[illegible]	22'-6
2H27 cut 2	2'-[illegible]	9'-5	[illegible]	22'-3
2H30 cut 4	3'-[illegible]	9'-5[illegible]	[illegible]	[illegible]
5H55 cut 5	[illegible]	3'-[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
*[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7V5 cut 14	4"	[illegible]	4'-0	6'-0
7V8 cut 14	43	2'-[illegible]	4'-1[illegible]	6'-5
7V15 cut 7	47	2'-0[illegible]	4'-2[illegible]	6'-5
7V14 cut 7	4"	2'-1[illegible]	4'-[illegible]	6'-5
15V15 cut 15	52	2'-1[illegible]	7'-4[illegible]	9'-6
15V16 cut 15	58	2'-0[illegible]	7'-5[illegible]	9'-6

*omitted from orig. bar bill

MARK	a	b
[illegible]	[illegible]	[illegible]

MARK	a	b	c
[illegible]	[illegible]	[illegible]	[illegible]

MARK	A	B	C	D	E
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

MARK	a	b	c	d	e
T1	21"	2'-3"	6'-10[illegible]	7'-5"	2'-0"
T3	21"	2'-5½"	6'-5[illegible]"	6'-10½	22½"
T5	21"	2'-5"	6'-5[illegible]	6'-11"	2'-1"
T6	21"	2'-5[illegible]"	6'-11½"	7'-4[illegible]	2'-1[illegible]"
T7	21"	5'-5½	12'-1"	13'-5"	2'-0"
T8	21"	5'-4[illegible]"	12'-1"	13'-2[illegible]"	2'-0[illegible]"

MARK	A	B	C	D
R8	25¾	7½	20½	6"

3" Max.

Add'l. Steel Bt 6 Lt Lane*

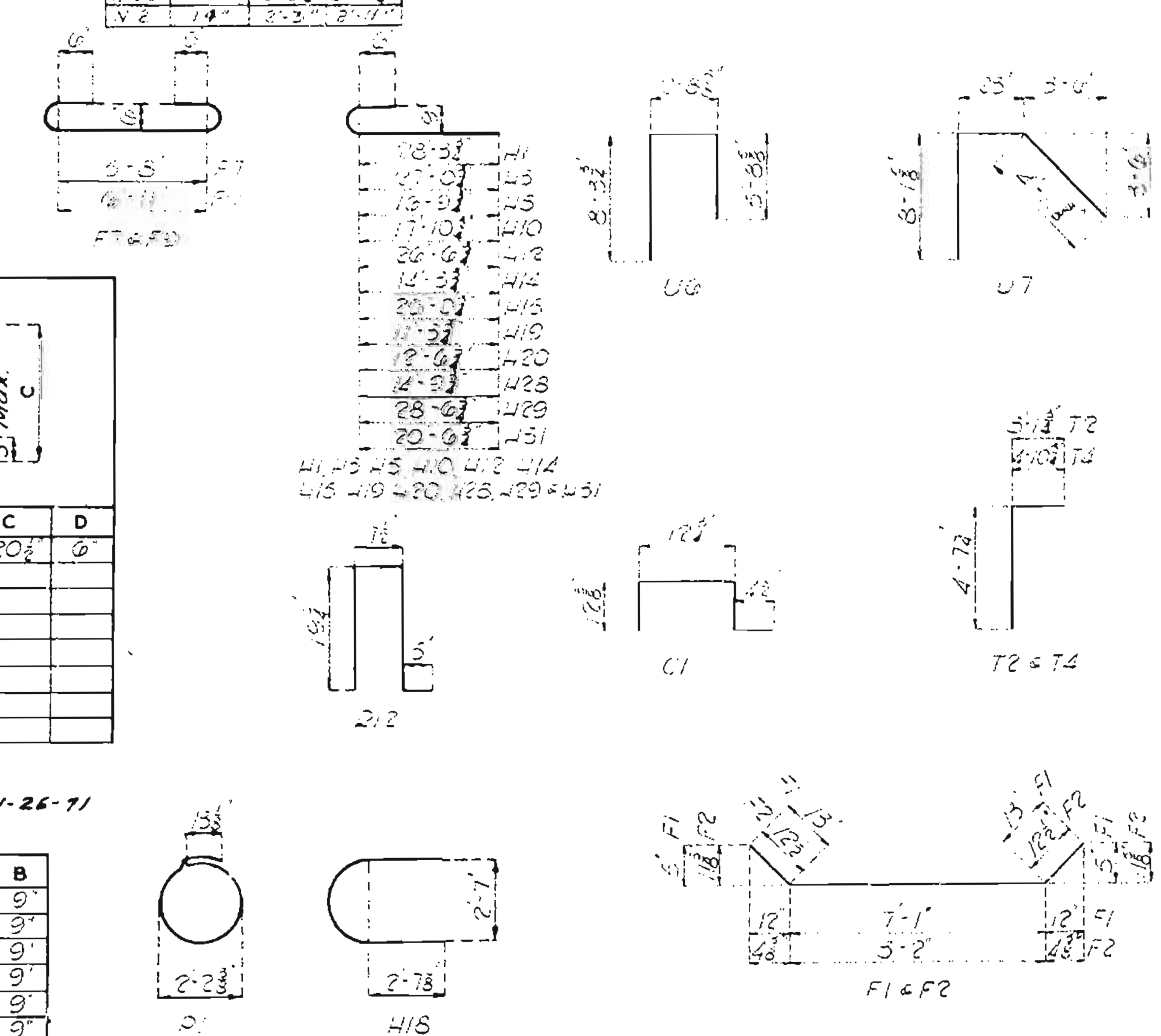
No	Size	Length	Mark	Location
12	#6	3'-0"	N1	Lt. Stem
2	#3	11'-6"	N2	Lt. Stem
6	#6	5'-6"	N3	Ctr. Stem
4	#6	6'-0"	N4	Ctr. Stem
8	#3	7'-11"	N5	Ctr. Stem
4	#4	5'-3	N6	Ctr. Stem

*Revised by Brg. Dept. 1-26-71

MARK	A	B
R2	2'-7½	9"
R3	2'-10½"	9"
R4	3'-0"	9"
R5	3'-1½"	9"
R6	3'-3"	9"
R7	3'-4½	9"
R10	4'-8½"	7½"
N5	2'-10"	2'-3"

Spot Weld #2 bars.

3" Pitch, 15 Turns, 9", 12", W1



BRIDGE
STATE ROAD
ABOUT
PROJECT NO.
STA.
STE. GENEVIEVE COUNTY

A-2269

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 3A of 13 ?

BOPP & SALLER & ASSOCIATES, INC.

DETAILED OCT. 1963 BY M.J.S.

CHECKED OCT. 1963 BY A.J.S.

STD. 90.4	REVISED
AUG. 1963	NOV. 1967

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	MO.		19		

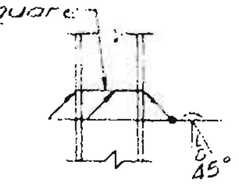
Note: Fill at end bent No. 1 was not carried above bottom of beam and wings until adjacent superstructure span was in place.

Top of backwall and expansion device for end bents No. 1 & 6 conforms to crown of road lay slab.

Backwall above upper construction joint was not poured until the structural steel of the expansion device had been installed and slab had been poured in adjacent span.

For Anchor Bolt Plan see Sheet No. 15 of 15.

Bolt splice (if required) Top of lower section to be cut square.



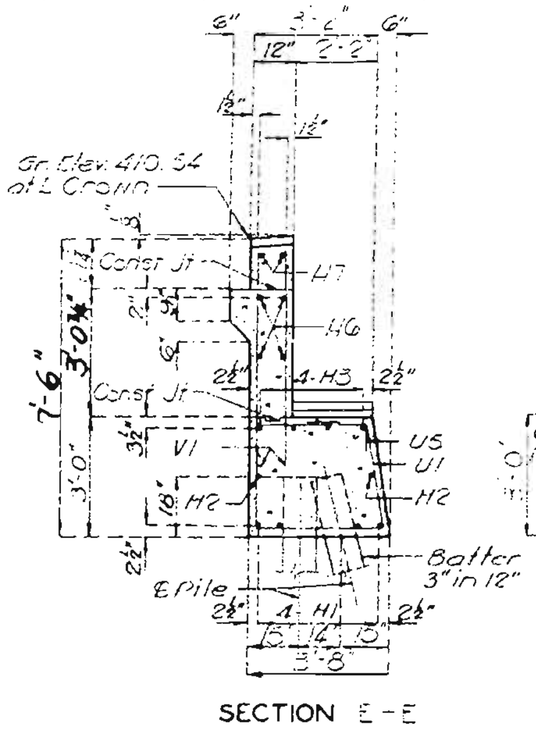
STEEL PILE SPLICE

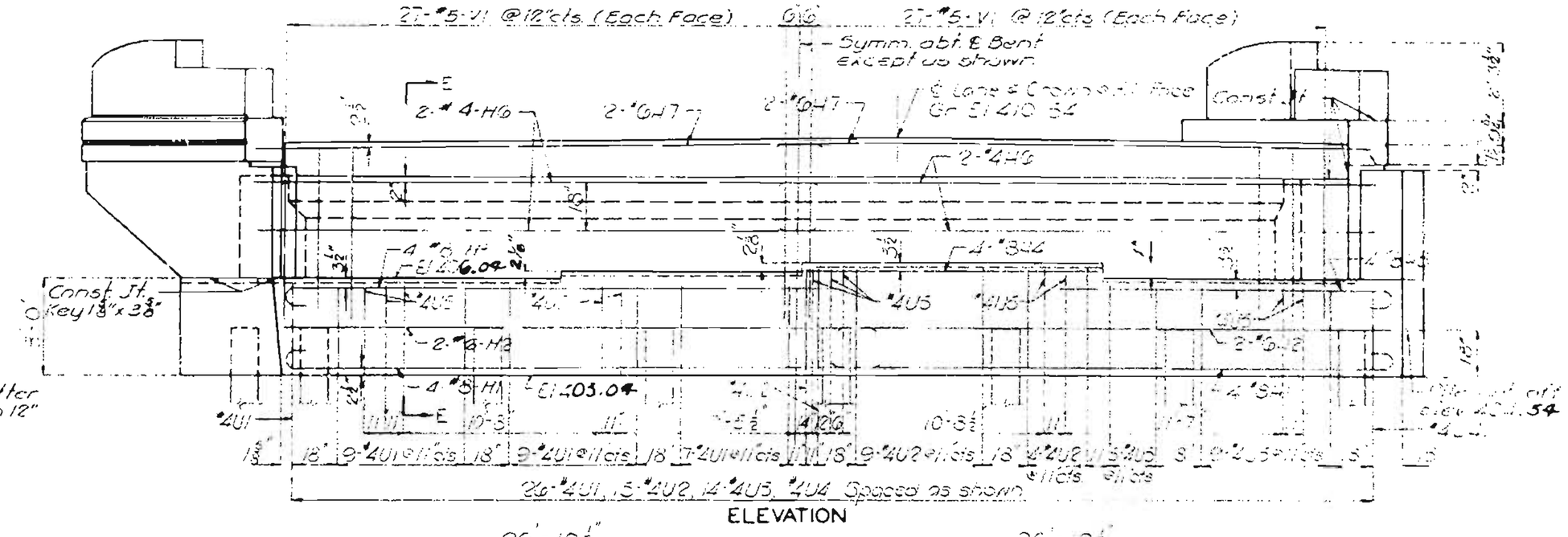
ROPP & SALLER & ASSOCIATES, INC.

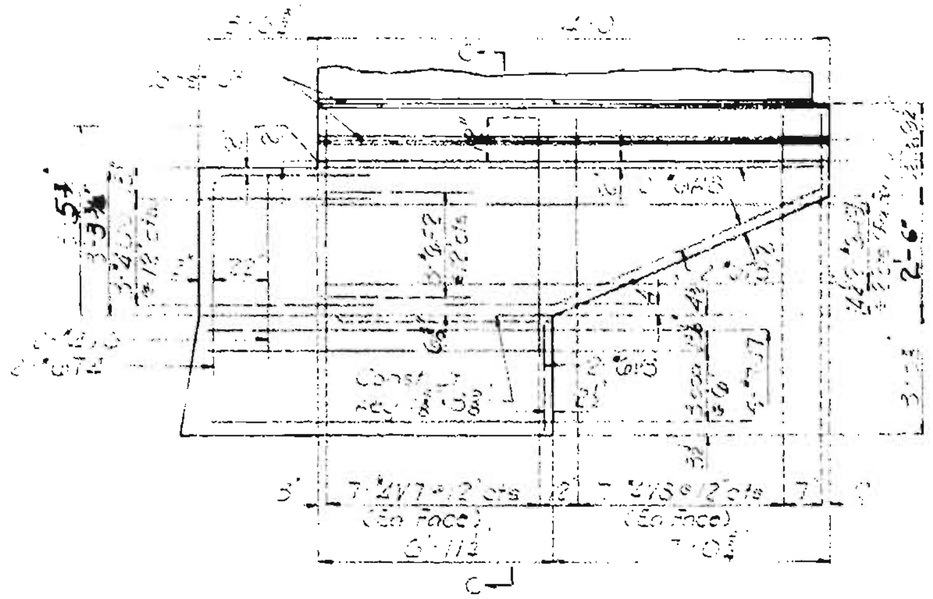
DETAILED OCT. 1968 BY M.J.S.

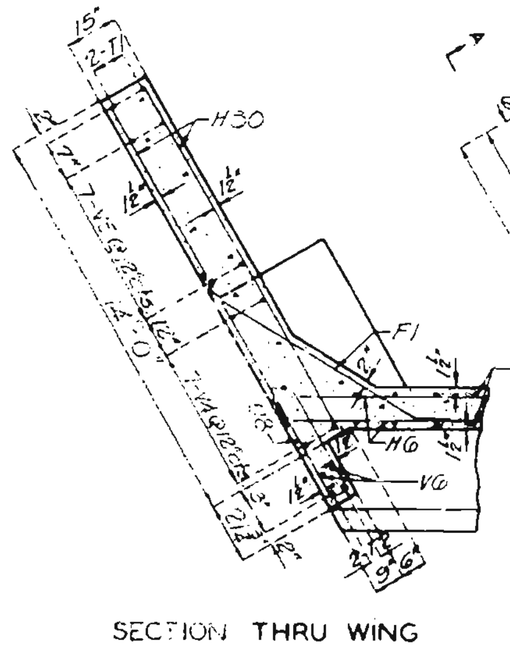
CHECKED OCT. 1968 BY A.J.S.

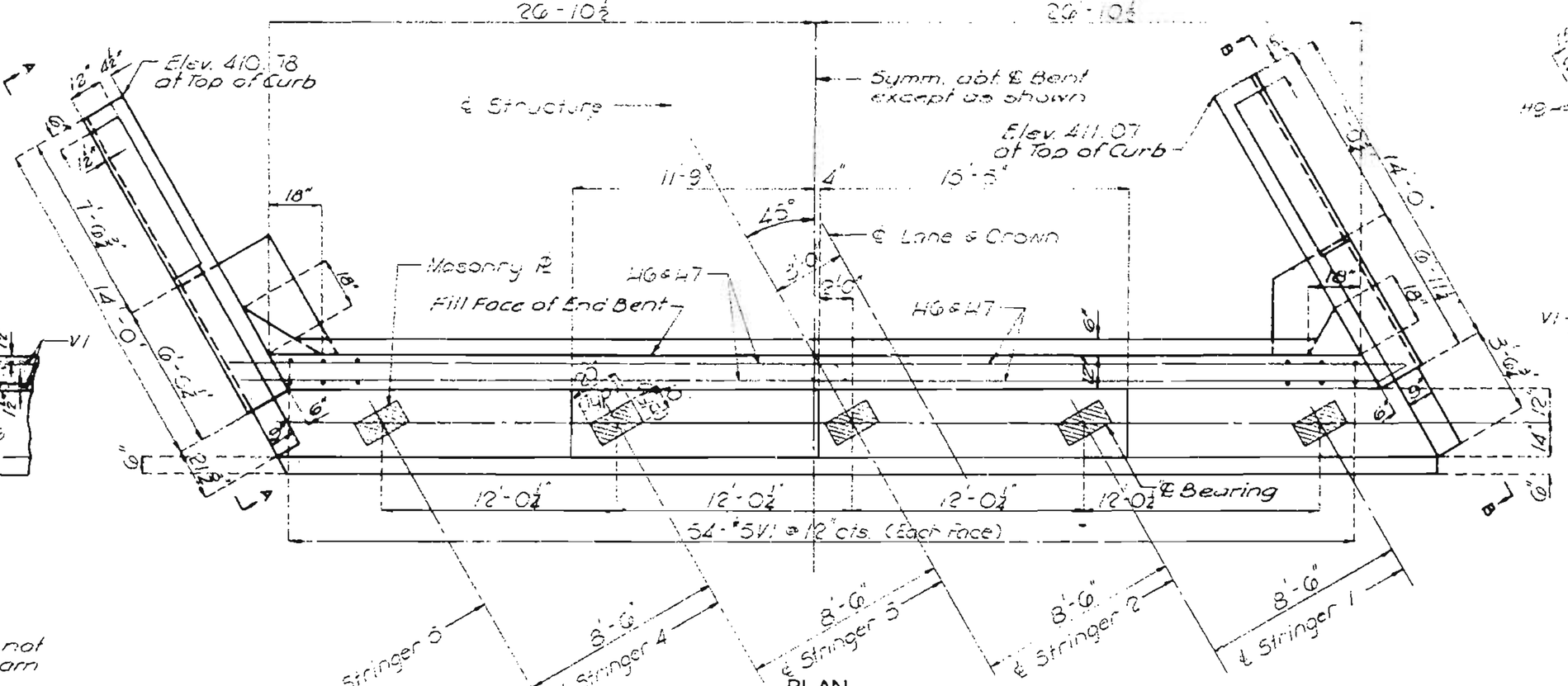
STD. 12.3	REVISED
APRIL 1965	JAN 1968

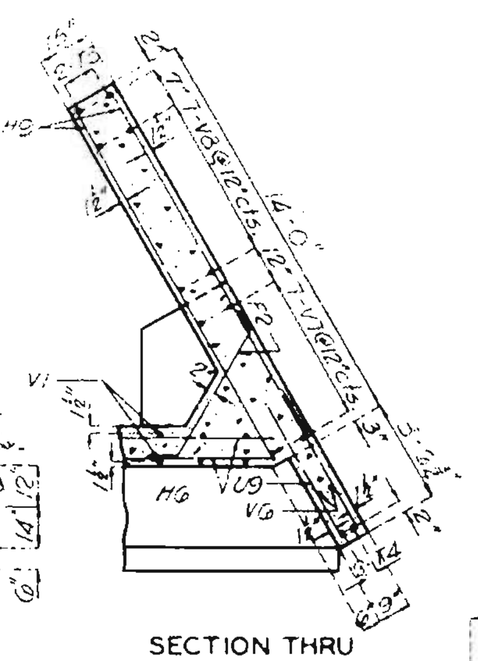


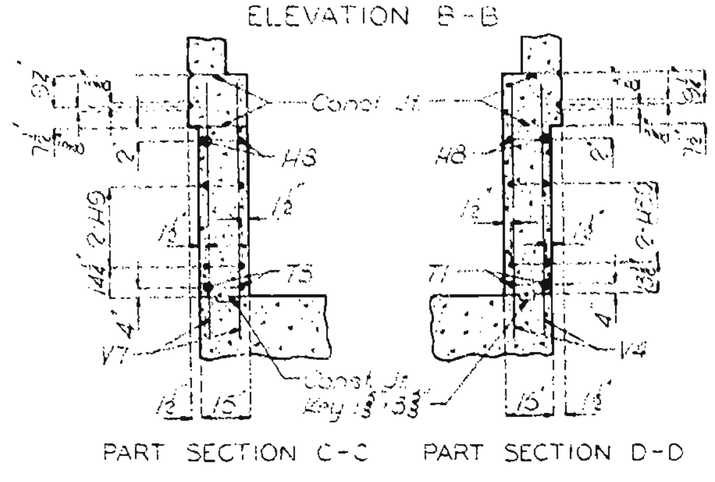


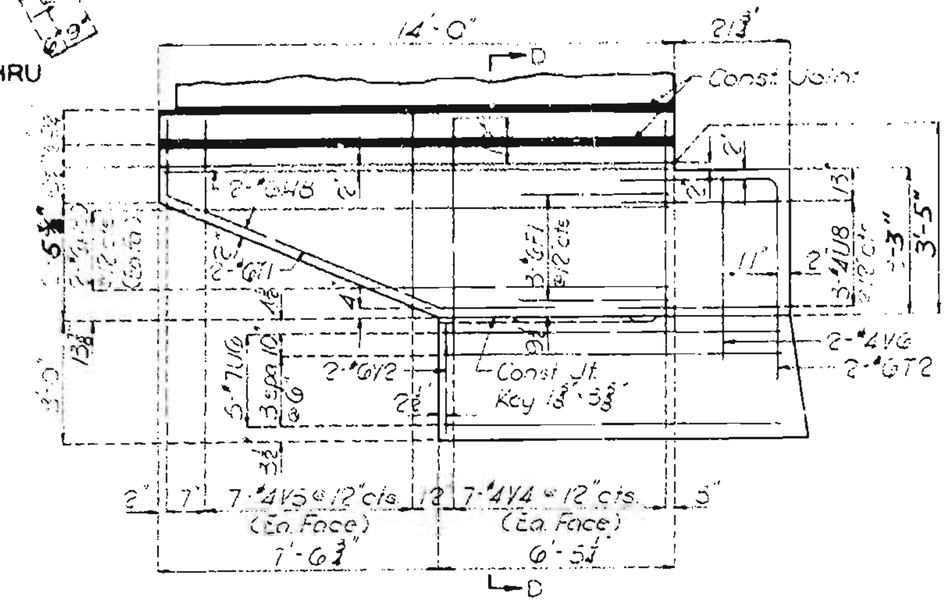


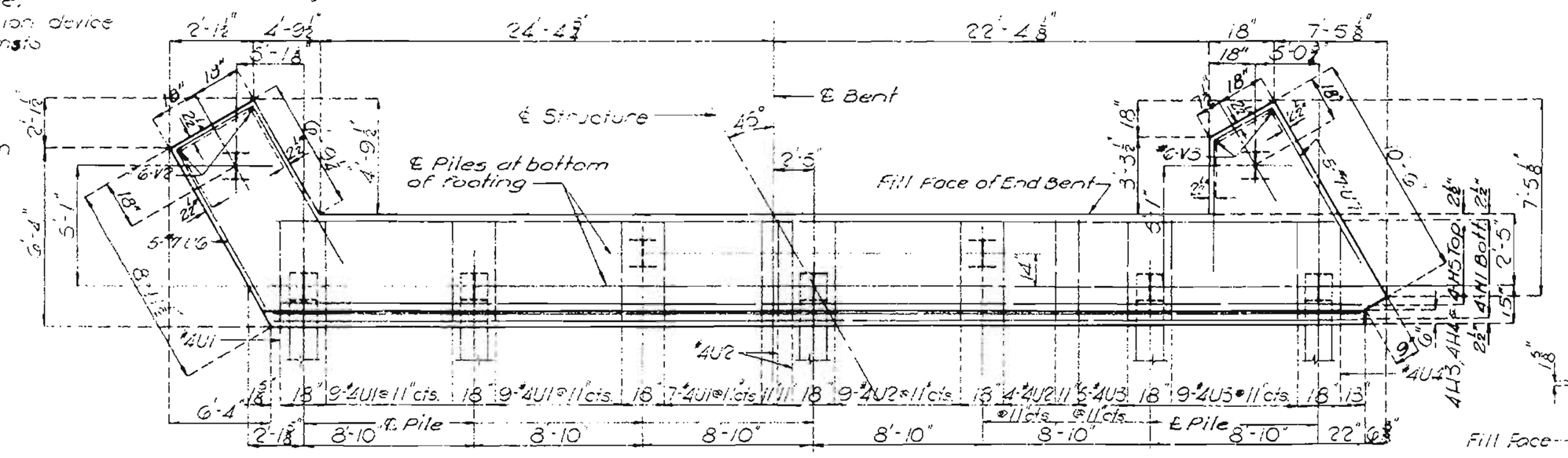


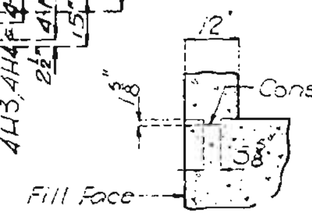












DETAILS OF END BENT NO. 1 RIGHT LANE

BRIDGE

STATE ROAD

ABOUT

PROJECT NO.

STA.

STE. GENEVIEVE COUNTY

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 4 of 9 Sheets

A-2269

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FOR INFORMATION ONLY

A2269R, Sht. 17

FOR INFORMATION ONLY

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	-	

Note: Fill at end bent No. 1 **was** not carried above bottom of beam and wings until adjacent superstructure spans **were in** place.
For additional notes and Detail of keyed Const. Joint see sheet 4 of 13.
For Anchor Bolt Plan see sheet 10 of 13.

SECTION E-E

ELEVATION

ELEVATION B-B

SECTION THRU WING

PART SECTION C-C

PART SECTION D-D

SECTION THRU WING

ELEVATION A-A

PLAN

Butt splice (if required) top of lower section to be cut square

STEEL PILE SPLICE

PLAN OF BEAM

BRIDGE
STATE ROAD
ABOUT
PROJECT NO. STA.
STE. GENEVIEVE COUNTY

BOPP & SALLER & ASSOCIATES, INC.
DETAILED 7-1 1968 BY M.J.S.
CHECKED OCT. 1968 BY A.J.S.

STD. 12.3	REVISED
APRIL 1965	JAN. 1968

DETAILS OF END BENT NO. 1 LEFT LANE

Note This drawing is not to scale Follow dimensions

Sheet No. 4 of 9

A-2269

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A2269R, Sht. 18

FED ROAD DIST. NO.	STATE NO.	FED AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5			19		

A-2269

STA.

COUNTY

BRIDGE

STATE ROAD

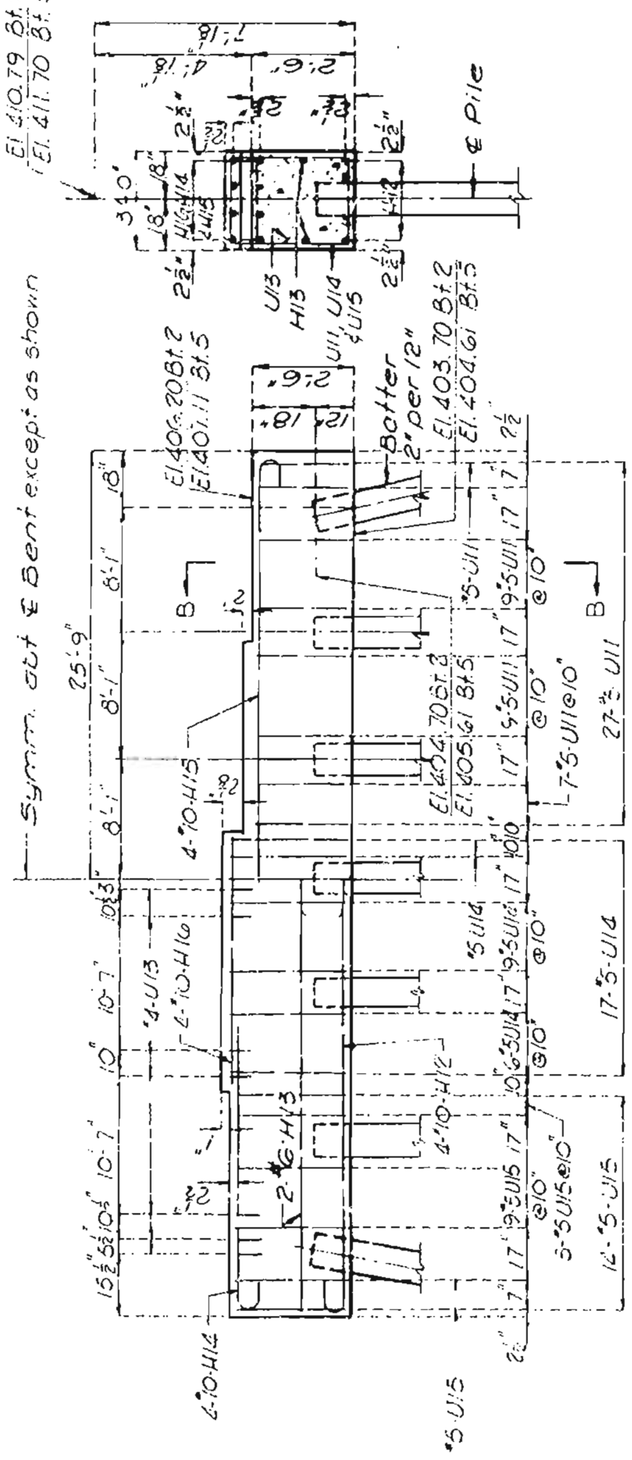
ABOUT

PROJECT NO.

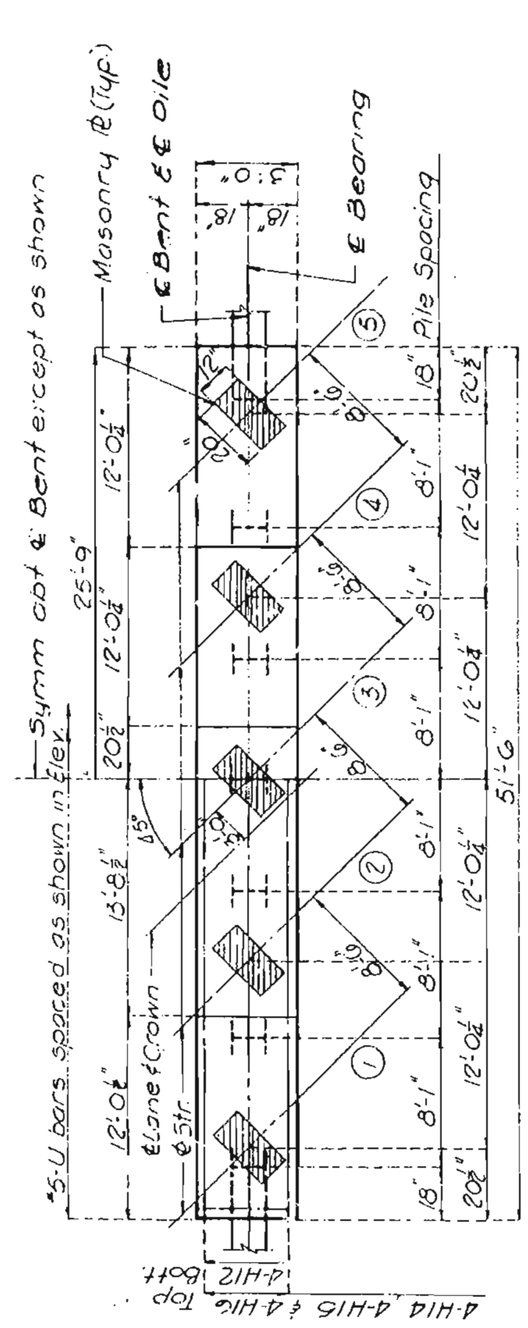
STE. GENEVIEVE

MISSOURI STATE HIGHWAY DEPARTMENT

SECTION B-B



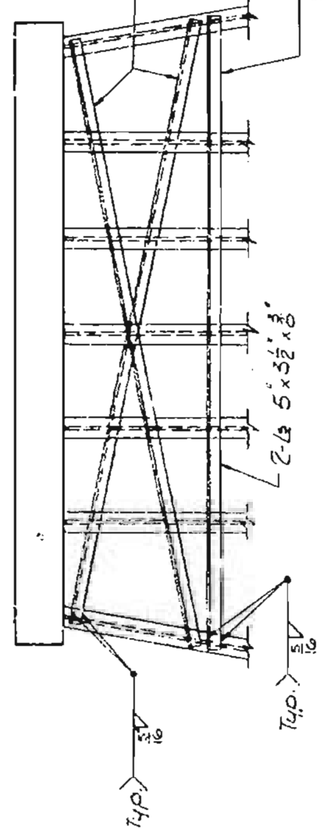
ELEVATION



PLAN

DETAILS OF INTERMEDIATE BENT NO. 2 & 5

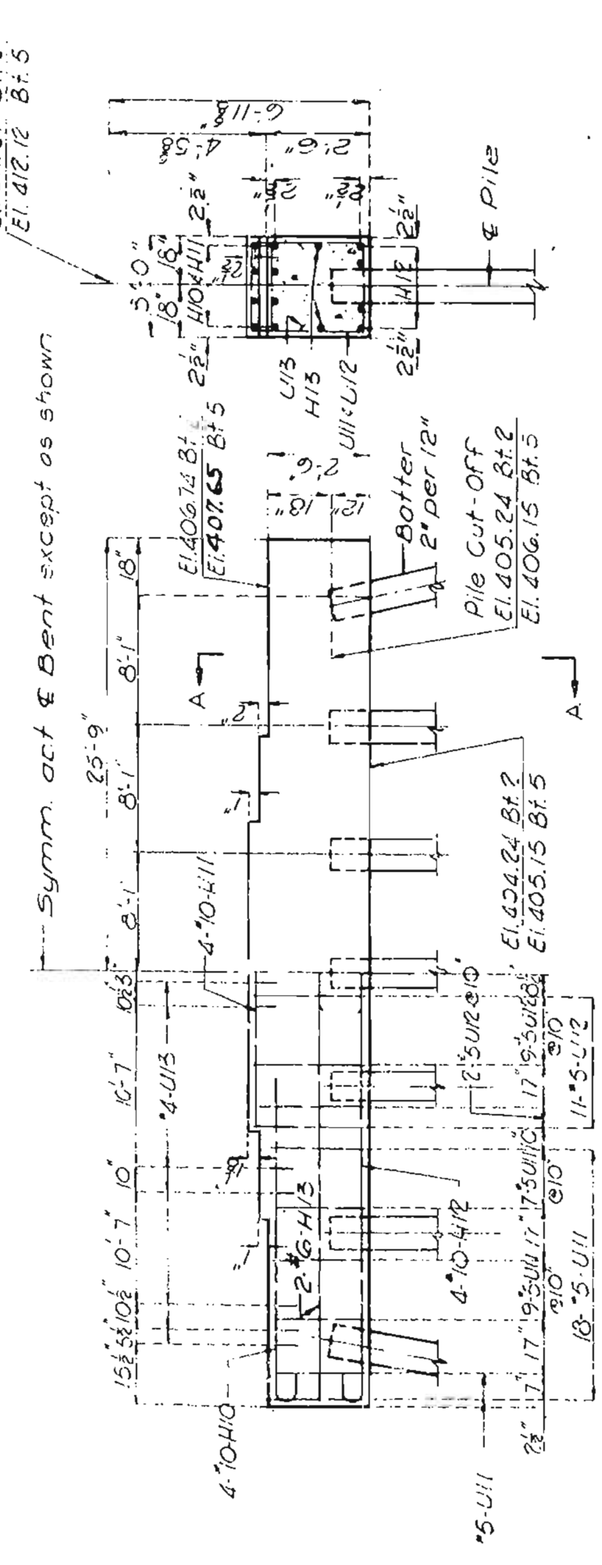
RIGHT LANE



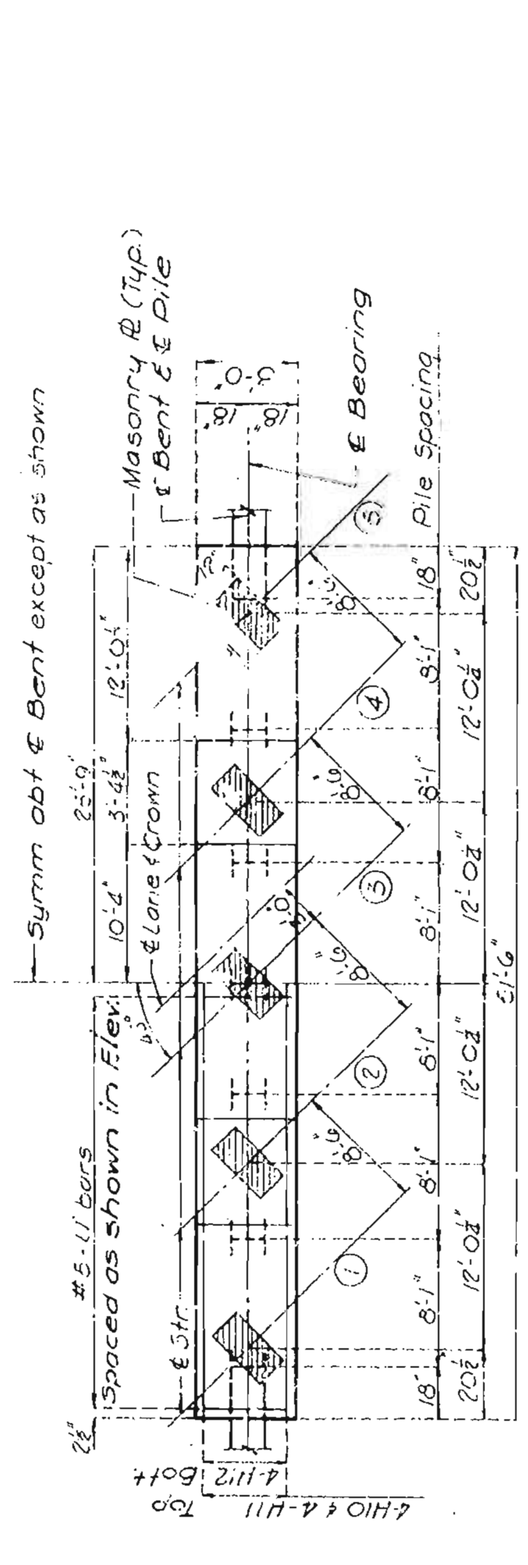
SWAY BRACING DETAILS

Sheet No. 64 of 72 Sh.

Note: This drawing is not to scale. Follow dimensions.



SECTION A-A



ELEVATION

PLAN

DETAILS OF INTERMEDIATE BENT NO. 2 & 5

LEFT LANE

BOPP & SALLER & ASSOCIATES, INC.

DETAILED OCT. 1968 BY W.C.H.

CHECKED OCT. 1968 BY A.J.S.

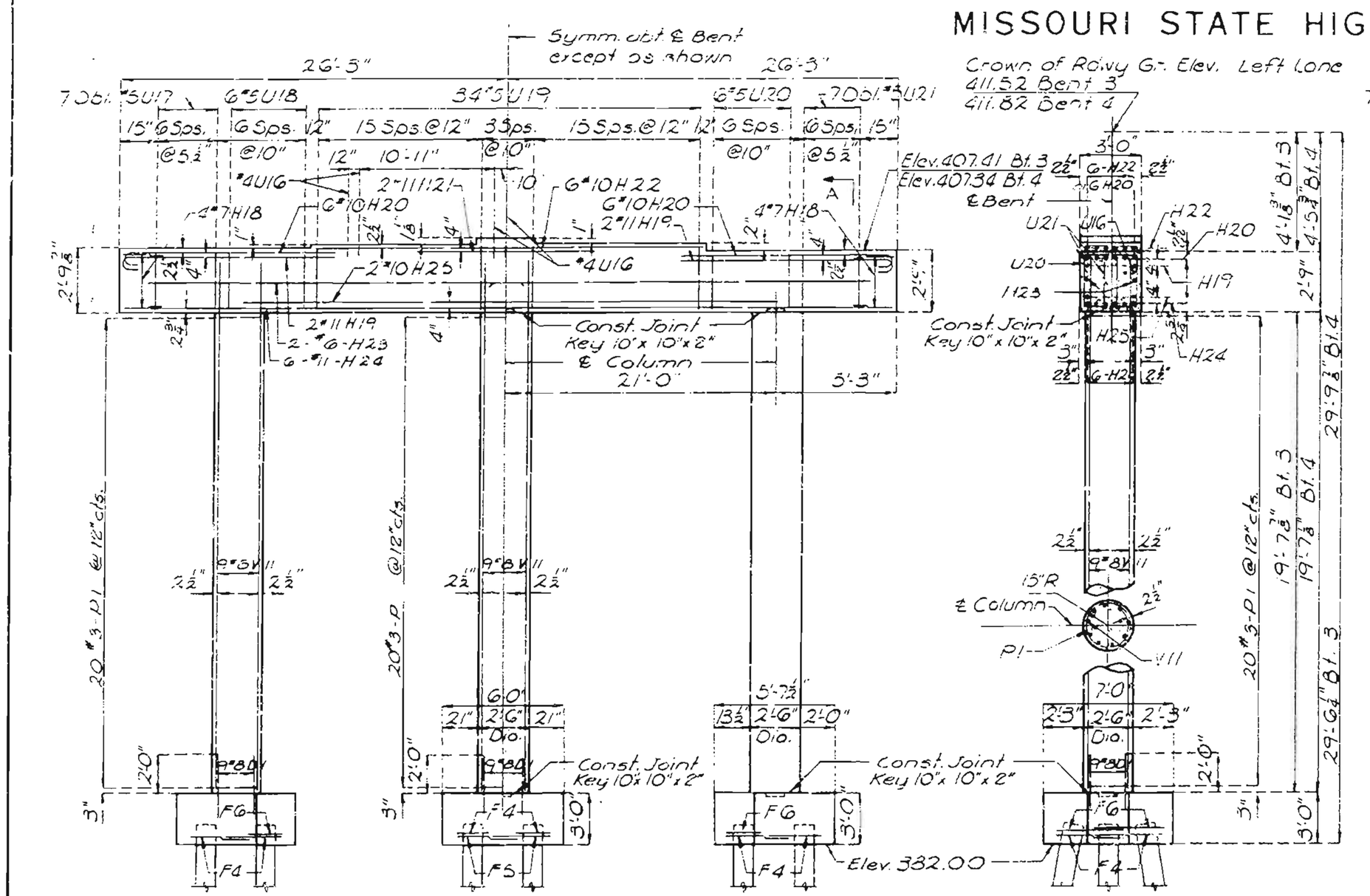
No.	Revised	Mar. 1964
96	June 1965	

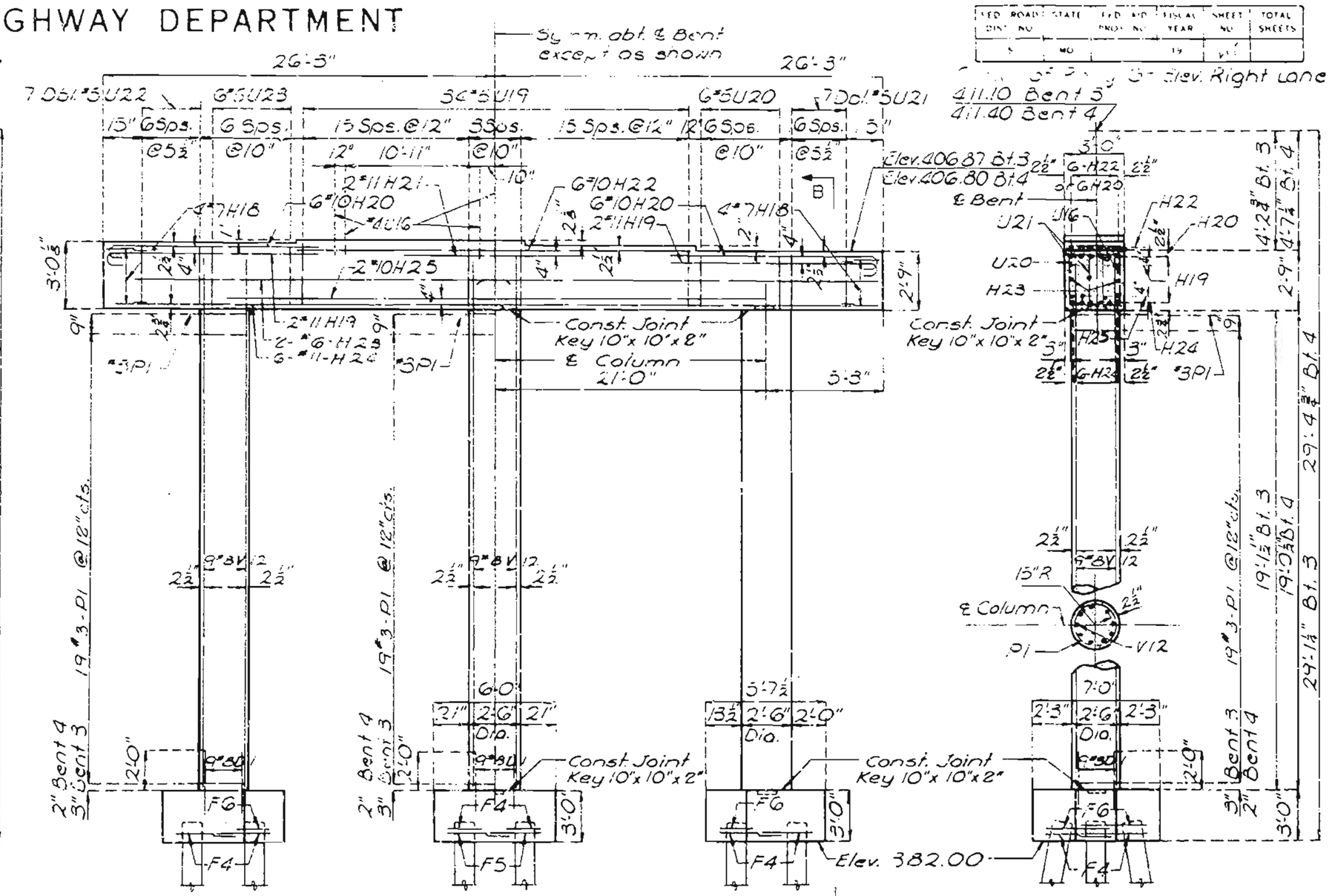
329

MISSOURI STATE HIGHWAY DEPARTMENT

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
			19		

FOR INFORMATION ONLY





330

No.	Revised	Jan 1965
19.6	Sept. 1962	

DETAILED OCT 1958 BY HLM
CHECKED OCT 1958 BY AJS

BRIDGE
STATE ROAD
ABOUT
PROJECT NO
STE. GENEVIEVE
STA.
COUNTY

Sheet No. 7A of 13 9

A-2269

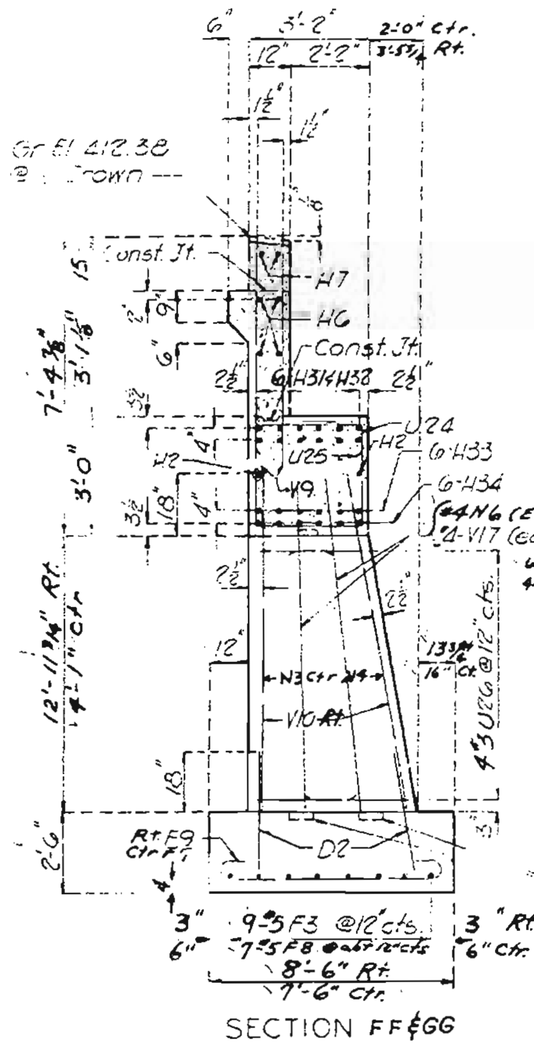
A2269R, Sht. 20


MISSOURI STATE HIGHWAY DEPARTMENT
ELEVATION
PLAN
PLAN OF BEAM
DETAILS OF END BENT NO. 6 RIGHT LANE
SECTION E-E
SECTION THRU WING
ELEVATION B-B
PART SECTION C-C
PART SECTION D-D
ELEVATION A-A
BRIDGE
STATE ROAD
ABOUT
PROJECT NO.
STE GENEVIEVE
STA.
COUNTY
A-2269
STEEL PILE SPLICE
STD. 12.3
APRIL 1965
REVISED
JAN. 1968
331

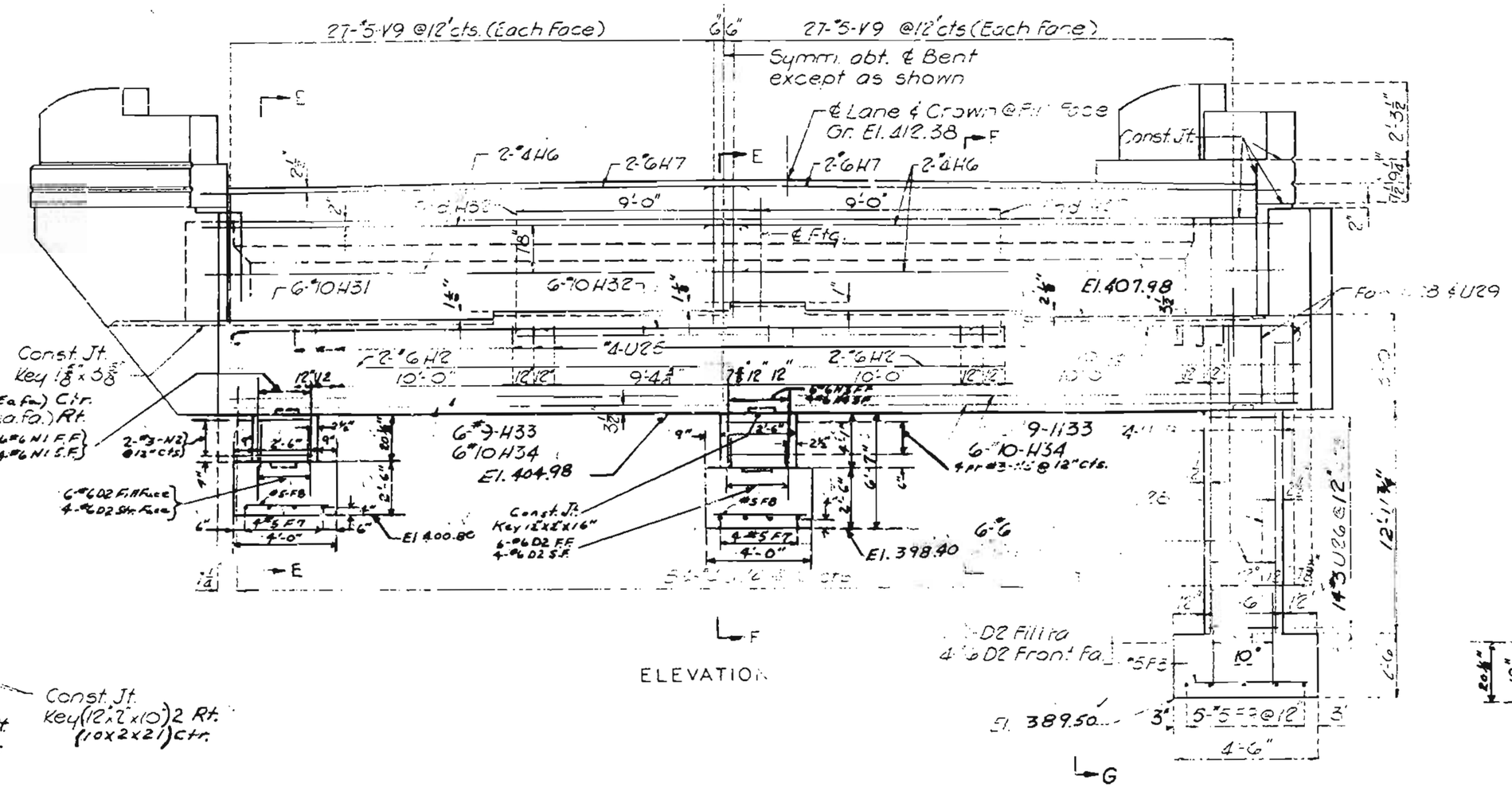
FINAL PLANS

MISSOURI STATE HIGHWAY DEPARTMENT

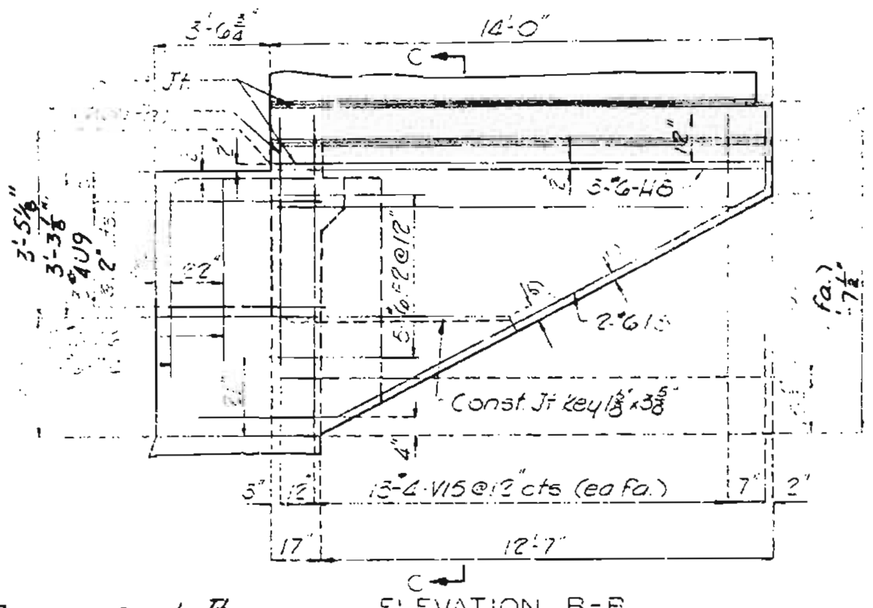
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		13		



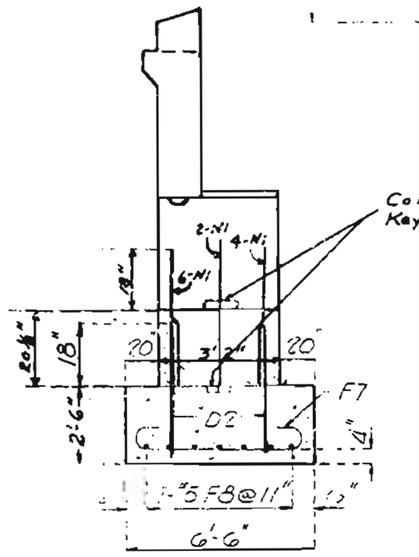
SECTION FF & GG



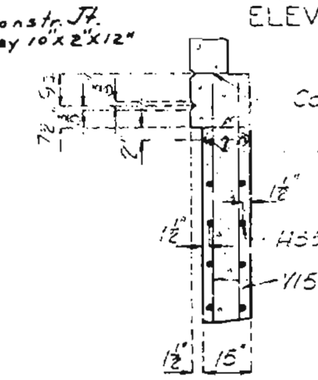
ELEVATION



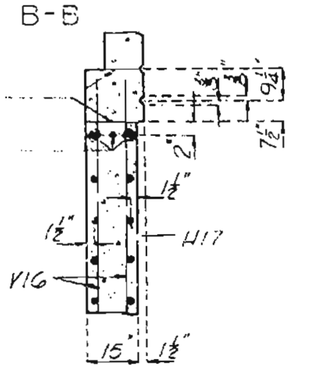
ELEVATION B-B



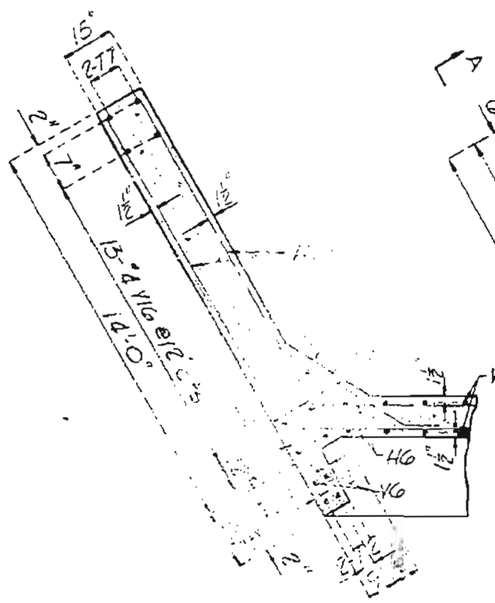
SECTION E-E



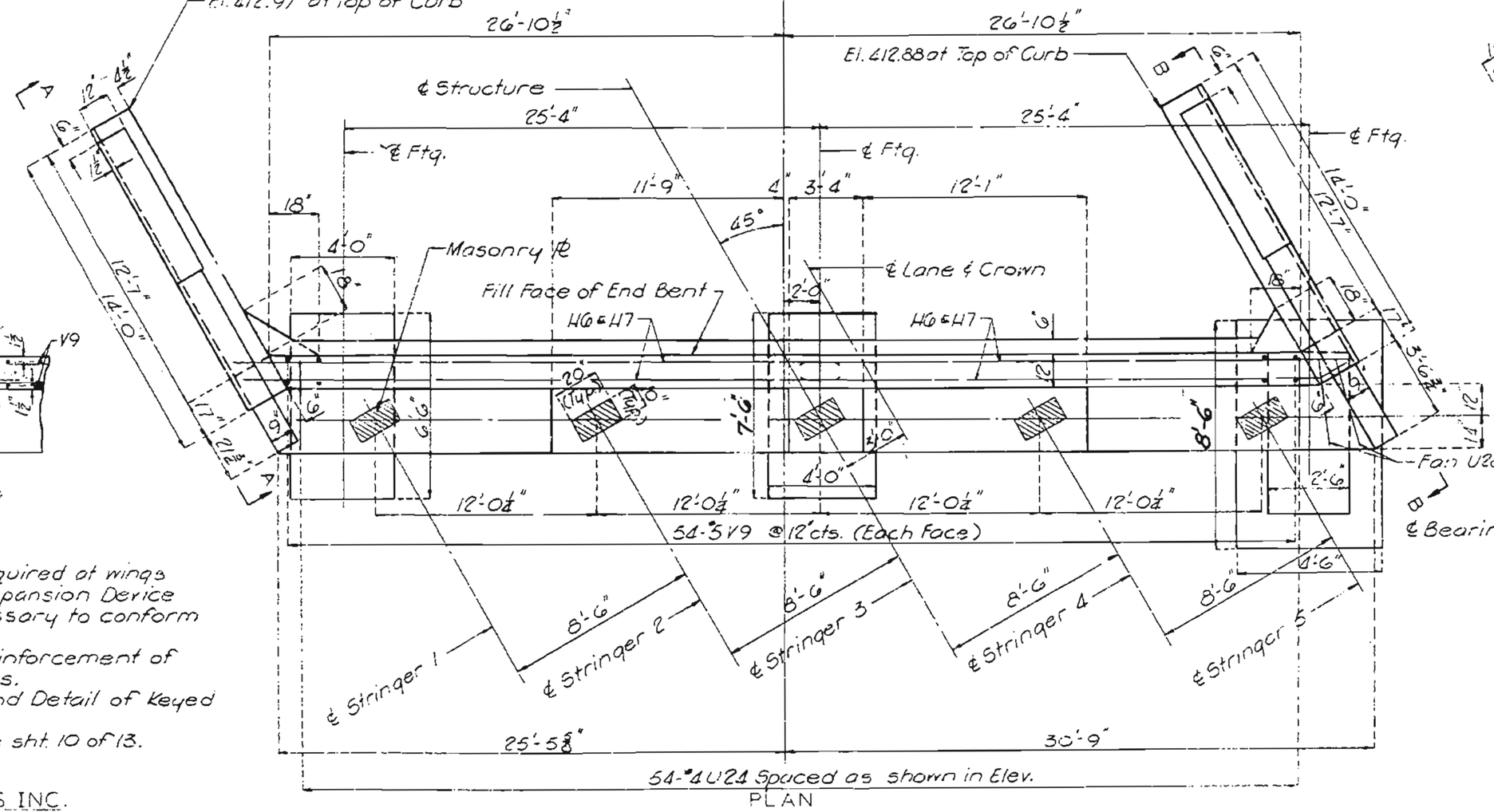
PART SECTION C-C



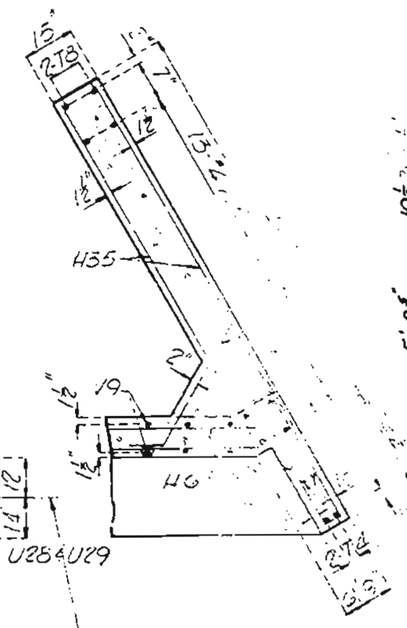
PART SECTION D-D



SECTION THRU WING



PLAN



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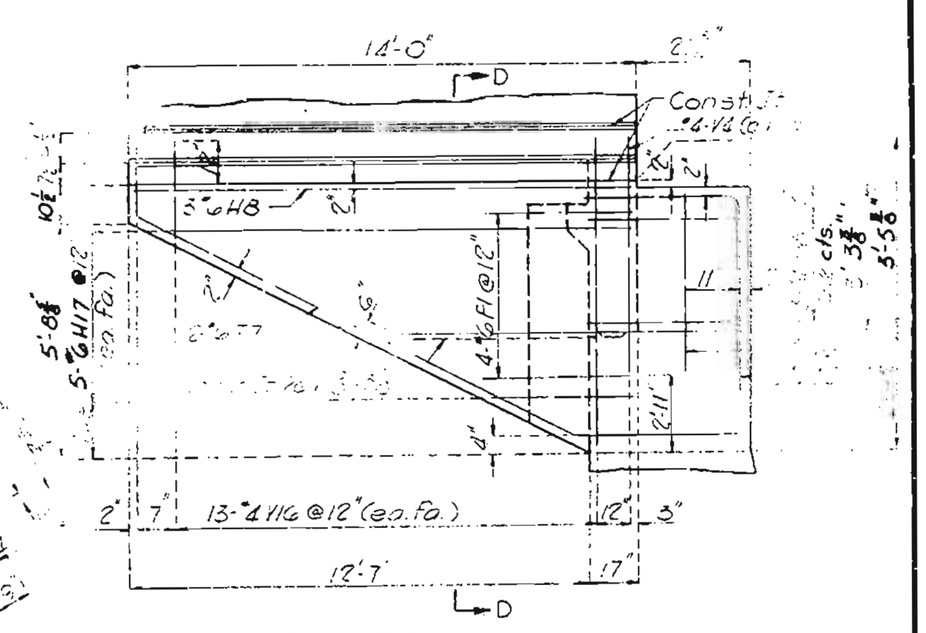

ELEVATION A-A

Note: Field bending was required of wings for ℄ H7 bars in backwalls with Expansion Device and for F1 & F2 bars when necessary to conform to slope of wing.

See handrail sheet for reinforcement of End Posts, Parapets and Curbs.

For additional notes and Detail of Keyed Const. Joint see sht. 4 of 13.

For Anchor Bolt Plan see sht. 10 of 13.

BRIDGE

STATE ROAD

ABOUT

PROJECT NO. **STA.**

STE. GENEVIEVE **COUNTY** FINAL PLANS

A-2269

BOPP & SALLER & ASSOCIATES INC.

DETAILED OCT. 1956 BY W.C.H.

CHECKED OCT. 1956 BY A.J.S.

DETAILS OF END BENT NO. 6 LEFT LANE

Note: This drawing is not to scale. Follow dimensions.

Sheet No. A-2269

FINAL PLANS

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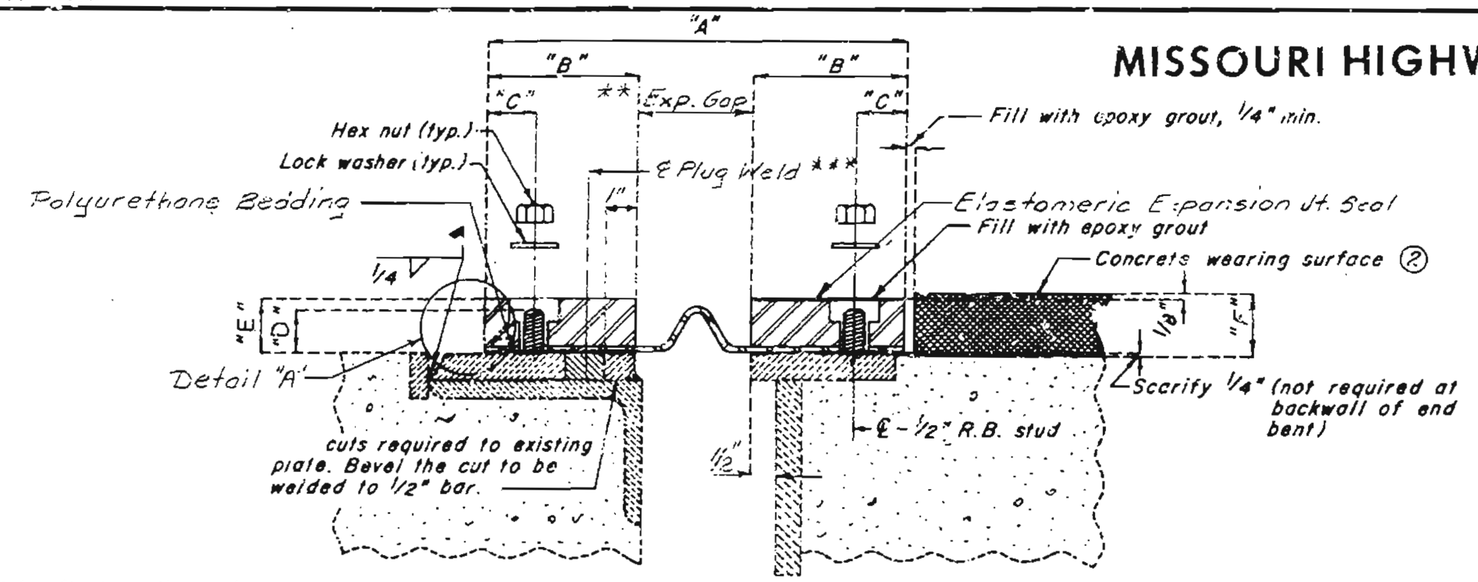
FOR INFORMATION ONLY

A2269R, Sht. 22

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	3	



PART SECTION THRU EXPANSION DEVICE

*** Use 1 1/16" plug weld @ 12" ctrs. spaced between studs.

Note: Part sections shown are at end bents. Int. bents similar except wearing surface shall be placed on both sides of expansion device.

Use 1/2"ϕ R.B. stud (welded) to anchor new expansion device to steel plate of existing expansion device.

TABLE OF DIMENSIONS

LOCATION	ACCEPTABLE ALTERNATE TYPES	EXP. GAP AT 60°	"A" AT 60°	"B"	"C"	"D"	"E"	"F"	ANCHOR STUDS SIZE	ANCHOR STUDS "G"
Bts. #1 & 6	GEN-STRIP COL 3"	2 1/4"	9 3/4"	3 3/16"	1 1/2"	1 1/8"	1 5/8"	2"	5/16"	65
	WABO BENDOFLEX "E"	2 1/2"	10 1/2"	4"	1 1/8"	1 1/8"	1 3/4"	2 1/2"	1/2"	50

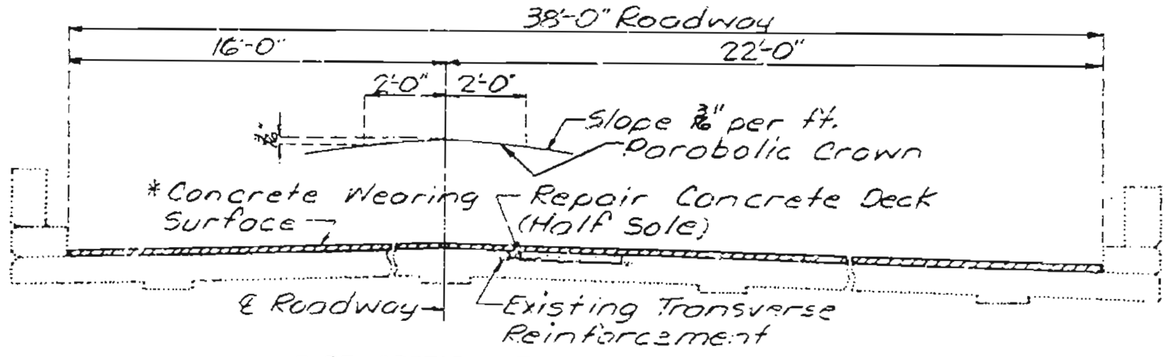
Notes: All dimensions are at right angles.

Expansion gap and dimension "A" shall be increased 1/8" for each 10° fall in temperature and decreased 1/8" for each 10° rise in temperature.

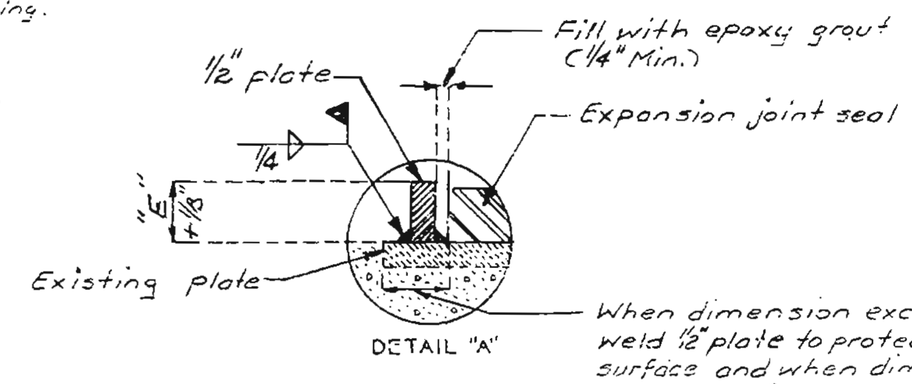
The certified nuts for the anchor studs shall be tightened to foot pounds ("G") specified in the table of dimensions. Retighten to ("G") foot pounds a minimum of 30 minutes after initial tightening.

The welded anchor studs shall be reduced base (R.B.) type.

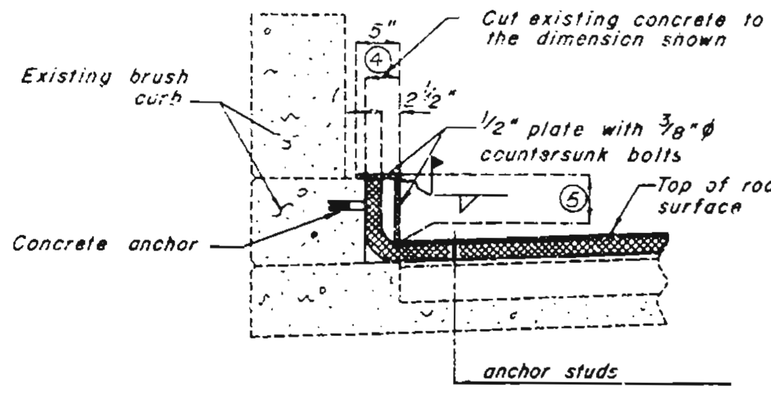
If existing expansion device has closed to less than expansion gap given in table, the expansion gap of the new device may be adjusted accordingly and installed in the same manner.



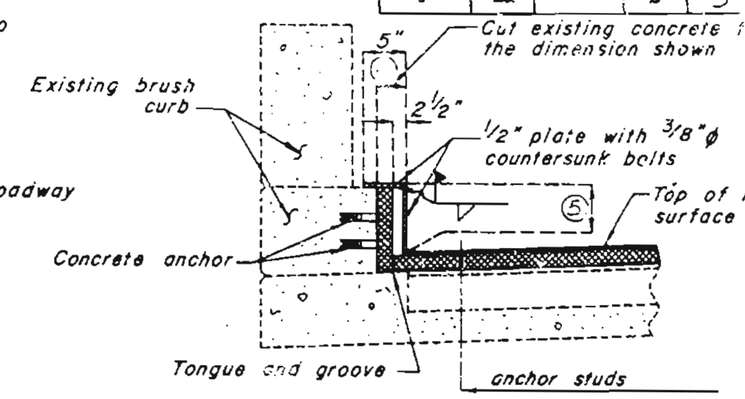
PART SECTION THRU SLAB



DETAIL "A"



TYPE "E" CURB



TYPE "G" CURB

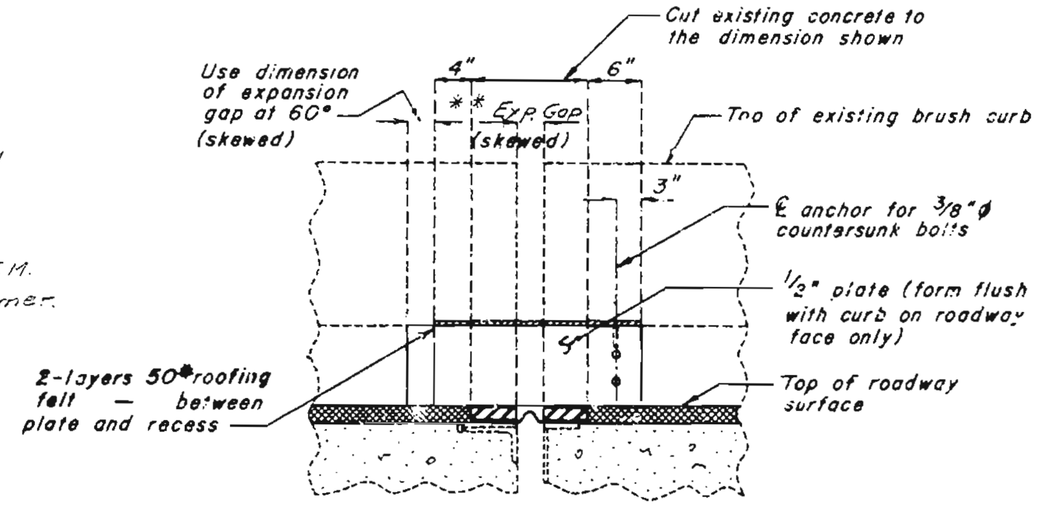
(2) Slope 1/8" in 10'-0" to 1 1/2" min. thickness for latex concrete wearing surface and 2" min. thickness for low slump concrete wearing surface.

(4) 4" for latex wearing surface and 4 1/2" for low slump wearing surface.

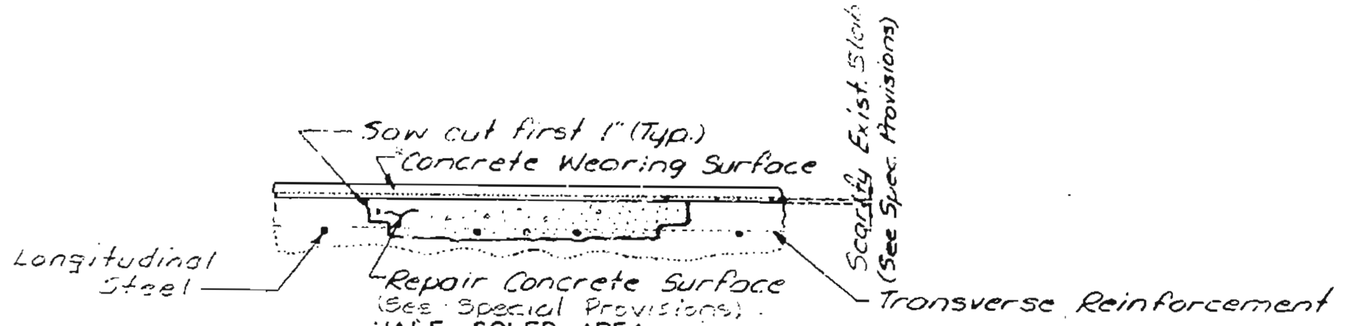
(5) 7 1/2" for latex wearing surface and 7" for low slump wearing surface.

Curb plate (A.S.T.M. A36) shall be galvanized in accordance with A.S.T.M. A123 or may be painted with zinc primer. See Special Provisions.

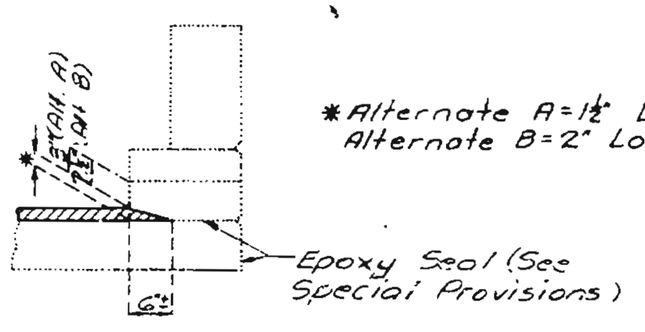
ALTERNATE CURB TREATMENTS



PART ELEVATION OF CURB



HALF SOLED AREA



TYPICAL SECTION AT CURB SHOWING OUTLETS

*Alternate A=1 1/2" Latex Modified Concrete, Alternate B=2" Low Slump Concrete.

ESTIMATED QUANTITIES

ITEM		LT. LA.	RT. LA.	TOTAL
Concrete Wearing Surface *	Sq. Yd.	1187	1187	2374
Repairing Concrete Deck (Half Soling)	Sq. Ft.	214	214	428
Elastomeric Expansion Jt. Seal (3.0 IN.)	Lin. Ft.	107	107	214

See Job Special Provisions for alternate use of Concrete Wearing Surface.

Note: Outline of old work is indicated by light dotted lines. Heavy lines indicate new work.

REPAIRS TO

BRIDGE: ROUTE I-55 OVER FOURCHE A DU CLOS CREEK

STATE ROAD INTERSTATE ROUTE 55

ABOUT 0.6 MI. SO. OF BLOOMSDALE

PROJECT NO. I-IR-55-2(37) **STA.** 416+61.80(LT. LA.) 415+71.80(RT. LA.)

JOB NO. 6-I055-308 **RTE.** I-55

STE. GENEVIEVE **COUNTY**

DATE

STD.
STD.
A-2269 R

DESIGNED 19__

DETAILED 19__

CHECKED 19__

Note: This drawing is not to scale. Follow dimensions.

Sheet No. ' of '.

FOR INFORMATION ONLY

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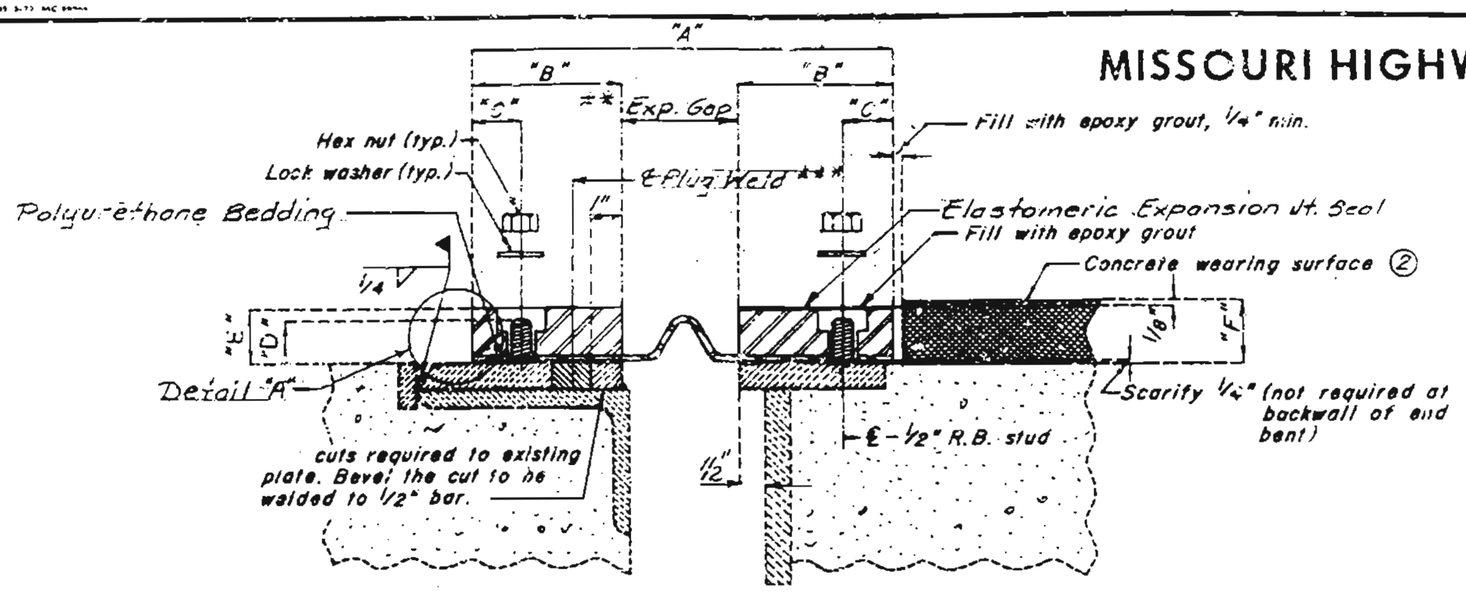
MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	MO.		19	9	



PART SECTION THRU EXPANSION DEVICE

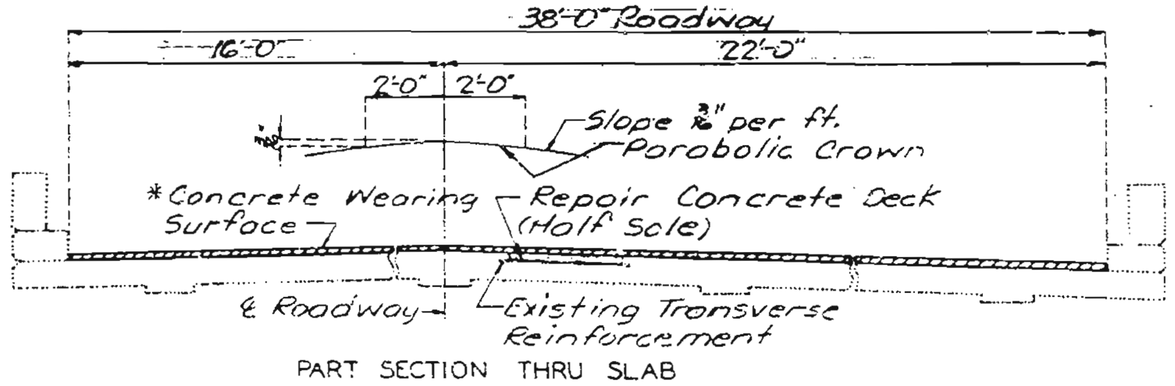
*** Use 1 1/16" plug weld @ 12" cts. spaced between studs.

Note: Part sections shown are at end bents. Int. bents similar except wearing surface shall be placed on both sides of expansion device.

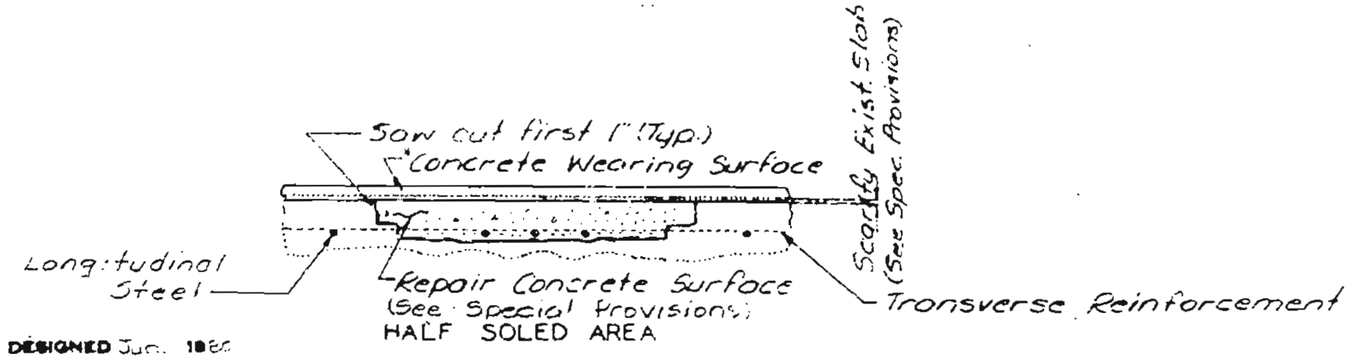
Use 1/2"ø R.B. stud (welded) to anchor new expansion device to steel plate of existing expansion device.

TABLE OF DIMENSIONS										
LOCATION	ACCEPTABLE ALTERNATE TYPES	EXP. GAP AT 60°	"A" AT 60°	"B"	"C"	"D"	"E"	"F"	ANCHOR STUDS SIZE	ANCHOR STUDS "G"
B15.1166	WABO BENDOFLEX "E"	2 1/2"	10 1/2"	4"	1 1/8"	1 1/8"	1 3/4"	2 1/8"	1/2"	50

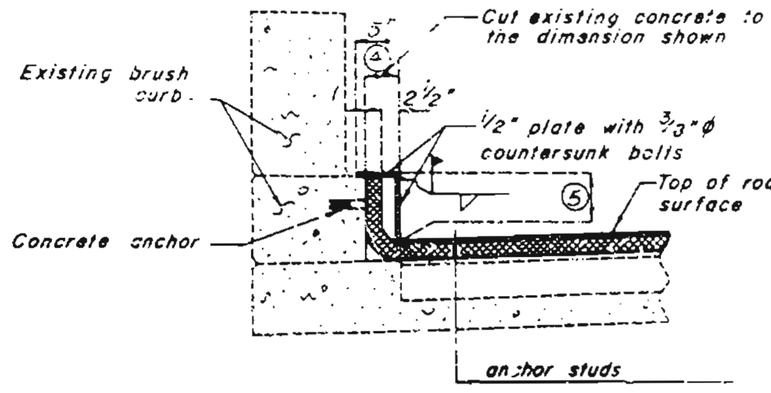
Notes: All dimensions are of right angles.
Expansion gap and dimension "A" was increased 1/8" for each 10° fall in temperature and decreased 1/8" for each 10° rise in temperature.
The certified nuts for the anchor studs were tightened to foot pounds ("G") specified in the table of dimensions. Retighten to ("G") foot pounds a minimum of 30 minutes after initial tightening.
The welded anchor studs were reduced base (R.B.) type.
If existing expansion device has closed to less than expansion gap given in table, the expansion gap of the new device may be adjusted accordingly and installed in the same manner.



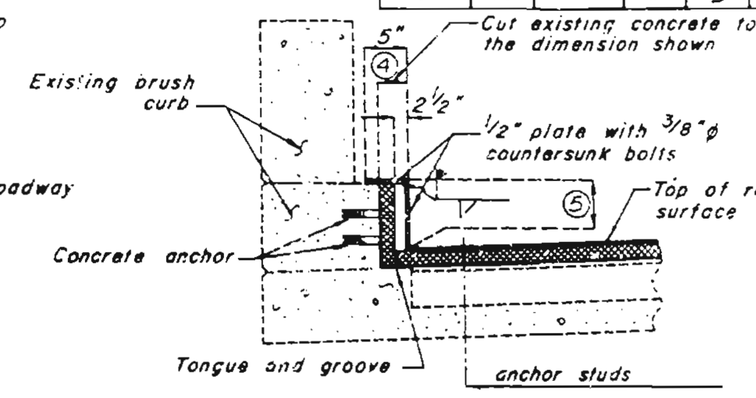
PART SECTION THRU SLAB



HALF SOLED AREA



TYPE "E" CURB



TYPE "G" CURB

②

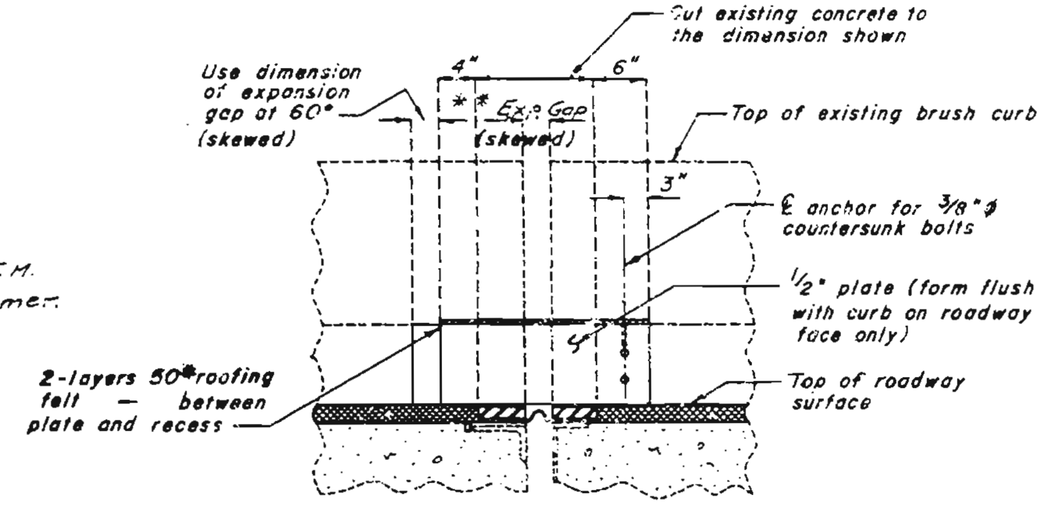
2" min. thickness for low slump concrete wearing surface.

④ 2" for Low Slump wearing surface.

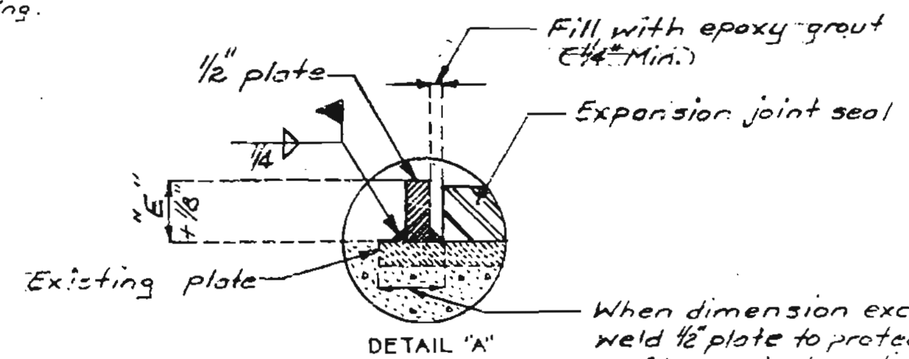
⑤ 7" for Low Slump Wearing surface.

Curb plate (A.S.T.M. A36) shall be galvanized in accordance with A.S.T.M. A123 or may be painted with zinc primer. See Special Provisions.

ALTERNATE CURB TREATMENTS

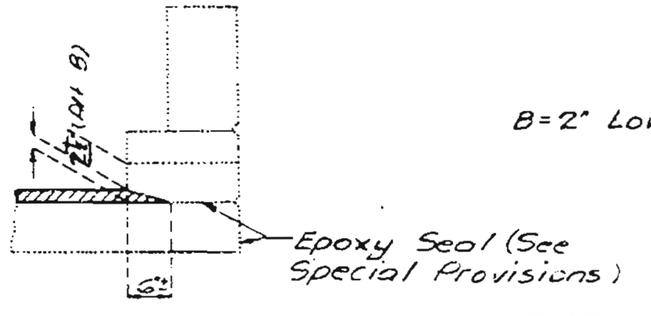


PART ELEVATION OF CURB



DETAIL "A"

FINAL QUANTITIES				
ITEM		LT. L.A.	RT. LA	TOTAL
Concrete Wearing Surface * (LOW SLUMP)	Sq. Yd.	1187	1187	2374
Repairing Concrete Deck (Half Soling) *	Sq. Ft.	22	31	53
Elastomeric Expansion Jt. Seal (3.0 IN.)	Lin. Ft.	107	107	214



TYPICAL SECTION AT CURB SHOWING OUTLETS

B=2" Low Slump Concrete.

Note: Outline of old work is indicated by light dotted lines. Heavy lines indicate new work.

REPAIRS TO

BRIDGE: ROUTE I-55 OVER FOURCHE A DU CLOS CREEK

STATE ROAD INTERSTATE ROUTE 55

ABOUT 0.6 MI. SO. OF BLOOMSDALE

PROJECT NO. I-IR-55-2(37) **STA.** 416+61.80(LT. L.A.) 415+71.80(RT. L.A.)

JOB NO. 6-I055-308 **RTE.** I-55

STE. GENEVIEVE **COUNTY**

DATE

STD.	
STD.	
A-2269 R	

DESIGNED Jun. 1986
DETAILED Jun. 1986
CHECKED Jun. 1986

Note: This drawing is not to scale, follow dimensions.

Sheet No. 1A of 1.

FOR INFORMATION ONLY

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